

The
HEMIST AND DRUGGIST
or RETAILER - WHOLESALE - MANUFACTURER

ished 1859

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Registered as a Newspaper

346
XLI

MARCH 25, 1944

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(Sodium Ethyl Mercuri Thiosalicylate, Lilly)

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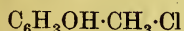
B.P.

CHLOROCRESOL

[P.C.M.C.]

Chlorocresol B.P.

Synonym. Parachlormetacresol.



Mol. Wt. 142.58

Prepared by the chlorination of metacresol.

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Soluble in *benzene, toluene, alcohol, ether, terpenes* and *fixed oils*.

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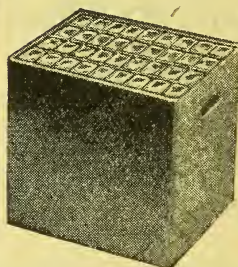
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SILATEX
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**THE BEST MEDICATED TABLET
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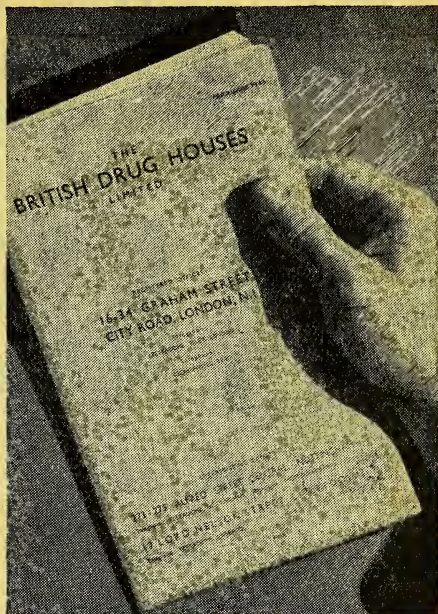
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IN TWO SIZES!**

**7^D AND
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INCLUDING TAX

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Backed by 36 years experience



P.A.T.A.

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sells on sight
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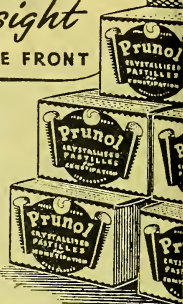
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Insecticide for control of Nits and Head Lice

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FREE with each
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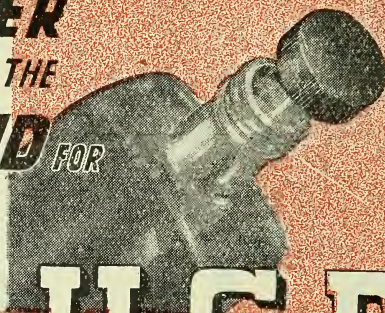
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TELEPHONE 3637-8-9

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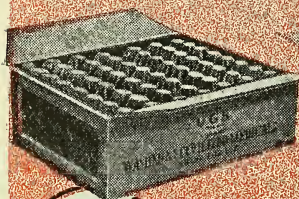
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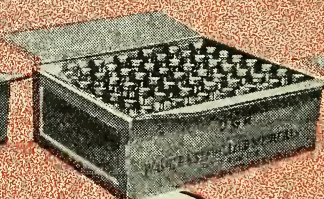


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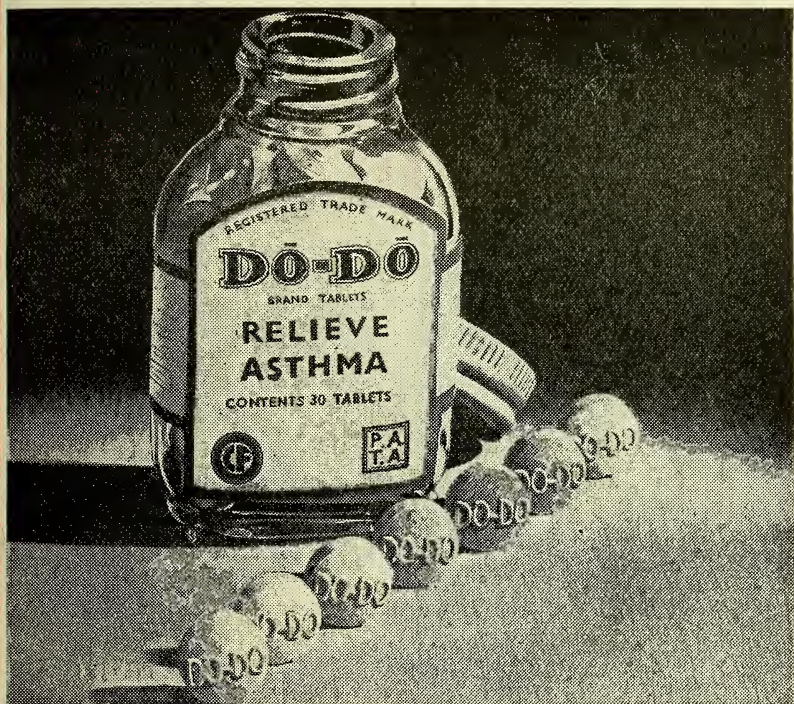
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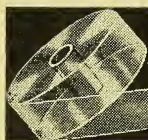
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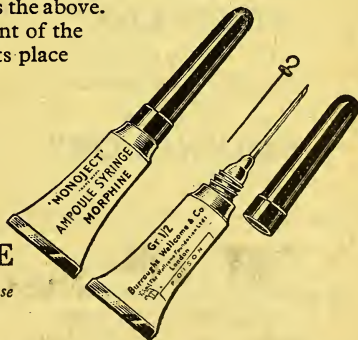
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NEWS OF THE WEEK

New Register of Pharmacists.—The 1944 edition of the Registers of Pharmaceutical Chemists and Chemists and Druggists, incorporating the Register of Premises, is now available from the Pharmaceutical Society, 17 Bloomsbury Square, London, W.C.1, price three guineas.

Authorities Restored.—The Home Secretary has suspended until further order the withdrawal from three medical practitioners (Drs. Michael James McNiff, Richard Malcolm Geldart and Ian Fleming McLeod) of their authorities under the Dangerous Drugs Act and Regulations.

National Medical Service for Animals?—State breeding-farms and a national health service for animals were urged recently by Dr. W. R. Wooldridge (president, National Veterinary Association). "We need far bolder schemes for the control of disease," he said, "and far more action to effect this control."

Supplies Limitation Register.—The home trade register kept by the Board of Trade under the Limitation of Supplies (Miscel-

laneous) (No. 22) Order has been revised. Copies of the new register, dated March 1, are obtainable (price 1s. 6d.) from H.M. Stationery Office. Registered persons should refer to copies of the new publication to ensure accurate computation of their quotas of controlled goods (i.e., cutlery, photographic goods, toys and indoor games). Further lists of amendments to the register will be published periodically.

Sugar for Hospitals.—The Ministry of Food has agreed to allocate, in certain circumstances, additional sucrose for the manufacture of medicines used in Emergency Medical Service hospitals. Applications should be made by manufacturers or by hospital pharmacists to the Ministry of Food, Allocations Control, Meadowcroft, Llannerch Road, Colwyn Bay. Upon application, sugar on the basis of 9 lb. per gall. of simple syrup is to be made available. Claims by manufacturers must be supported by actual orders received, and must state the quantity of sugar or simple syrup required to fill the order. Claims by hospital pharmacists must give particulars

of the purpose for which the sugar is required. After investigation, a permit for the appropriate amount of sugar will be sent to the manufacturer or the hospital pharmacist, who should lodge this with his supplier. By agreement with the Ministry of Health, $2\frac{1}{2}$ lb. of glucose monohydrate or vitaminised glucose per annum is provided for each occupied bed. Supplies of dextrose B.P. for intravenous use are provided as required.

British Association of Chemists.—At the recent annual meeting of the Scottish section Mr. J. Kay was re-elected chairman.

Not Detained.—Paul Mainon, aged four, Bradford Road, Bolton, Lancs, swallowed fifty-two saccharin tablets on March 17; he was taken to the local Royal Infirmary but not detained.

Long Eaton Rota.—An arrangement has been entered into under which chemists in Long Eaton will operate a rota to ensure that one pharmacy is open between 11.30 a.m. and 12 noon every Sunday.

Fire.—A recent outbreak of fire at the premises of Parkes, Ltd., Upper Richmond Road, East Sheen, London, S.W., which spread to the next-door premises of Timothy Whites & Taylors, Ltd., resulted in severe damage to stock at both businesses.

Women Medical Students.—As a result of the recommendations of a subcommittee appointed by the Senate of the London University, all medical schools of London University are expected to approve the admission of women students on the same terms as men. Hitherto nine schools have not accepted women students.

Managing Director as Mines Volunteer.—Among men who have volunteered for the pits and are now undergoing training at Muircockhall, Dunfermline, is Mr. William Greig, Mirrlees Drive, Glasgow, who before his call-up was managing director of the New Apothecaries Co., wholesale and retail druggists, Glassford Street, Glasgow.

Council Candidates at Manchester.—At a meeting of the Manchester Association and Branch of the Pharmaceutical Society on March 8, Mr. J. Tomlinson in the chair, addresses were given by Messrs. W. E. Phillipson and H. Steinman (Manchester candidates in the Pharmaceutical Society's Council election). Each gave an outline of his election policy.

Isle of Wight Branch Officers.—At a meeting in Newport, Isle of Wight, recently,

Mr. G. A. Franklin, Lake, was elected *Chairman* of the I.O.W. Branch of the Pharmaceutical Society, and Mr. M. Thatcher, Shanklin, *Secretary*, in place of Mr. W. Ramage, Ryde, who resigned recently after holding the post for twenty-one years.

Refrigeration to Preserve Vitamins.—Professor Sir Jack Drummond (Senior Scientific Adviser to the Ministry of Food) stated recently that the loss of some 70 per cent. of the vitamins of fresh greens was caused by the three or four days taken in transport from gathering until they arrive in greengrocers' shops, and that the only way to prevent the loss was by the use of transport of some system of refrigeration.

Patents Law Commission Proposed.—The working of the existing patents law was discussed by the Parliamentary and Scientific Committee at the House of Commons recently, when it was decided to urge the Government to set up a Royal Commission to inquire into existing legislation and into the working of cartels. The predominant opinion was that, although British patent law is superior to that of any other country, important alterations are needed.

Institute of Export.—At the annual meeting of the Institute of Export recently, the president and vice-presidents were re-elected, with three new vice-presidents. A ballot for seven vacancies on the council resulted in the election of Messrs. R. L. Bradley, A. E. Evans, C. C. Farrow, A. J. Jupp, A. H. Taylor, A. E. Upton and J. N. Walford. At a subsequent meeting of the council Mr. G. T. MacEwan was re-elected chairman and Mr. T. Boyd vice-chairman.

Fusion of Optical Bodies.—A special committee of the Institute of Ophthalmic Opticians and Joint Council of Qualified Opticians has considered Counsel's opinion upon measures for the fusion of the two bodies (see *C. & D.*, March 11, p. 27) and has decided to give effect to the proposals under which both existing bodies will be wound up and a new body formed. A draft agreement is being drawn up for consideration by both parties and, after acceptance, for submission to extraordinary general meetings of each body.

Australian Shippers' Association.—The annual meeting of the Australian and New Zealand Merchants' and Shippers' Association was held on March 8, when the following officers were elected: *Chairman*, Mr. D. V. Thomson; *Vice-president*, Mr. R. F.

Ellis; *Treasurer*, Mr. H. V. Parbury; *Auditors*, Messrs. W. L. Sandover and H. O. Harries; and *Secretary*, Mr. E. A. G. Took. Among members elected to the *Committee* were Messrs. T. W. Grimwade (Drug Houses of Australia, Ltd.), S. Jacobs (J. Nathan & Co., Ltd.), and P. Nesbitt (Gollin & Co. Proprietary, Ltd.).

Rockefeller Grant for Penicillin Research.

In a review of the activities of the Rockefeller Foundation in 1943, given in New York recently by the president of the Foundation, it was revealed that a grant to H. W. Florey (Professor of Pathology, Oxford University and a former Foundation Fellow) had led to development of the clinical use of penicillin. A grant of \$1,280 (£320) towards "a chemical approach to the problems of pathology" had been made to Dr. Florey in 1936; in 1939 he was granted \$5,000 (£1,250) for a year's support of the work and a similar grant was made in the following year.

Council Candidates Address Employees.—

At a meeting held under the auspices of the London division, Association of Pharmaceutical Employees in London recently, three of the candidates in the forthcoming Council election made statements of policy. Mr. F. H. CONNELLY said there must be an end of "cheap labour" apprentices. Miss M. C. ISLIP said she stood as an independent candidate. She felt there should be greater representation of women on the Council. Mr. W. S. BENJAMIN urged that the Society should actively associate itself with the public demand for the best possible national health service.

President at Doncaster.—Mr. W. Spencer Howells (president, Pharmaceutical Society) discussed the proposals for a national health service at a meeting of the Doncaster Branch of the Society recently, when he said that, provided they were given some security of tenure and were not expected to carry on at a loss, members of the Society could provide efficient pharmaceutical service to the community. Uncontrolled competition between facilities given by the chemist and those provided by the public authorities could not be tolerated, and there would be no justification for a local authority opening a dispensary and health centre in a district where adequate service was already provided.

Guild of Public Pharmacists.—The election of ordinary and district members of the Guild council is shortly to take place. Under the Guild's new constitution and

rules the council consists of sixteen members elected by postal ballot. Ten members of the council are ordinary members elected by postal ballot open to all members. Any member may nominate any other member as an ordinary member of council. Six members of council are district members, each representing and having a registered address in one of the districts defined in an appendix to the rules. Any member with a registered address in a particular district may nominate any other member with a registered address in the same district for election as a district member of council. No member may accept nomination for election as ordinary and district member at one and the same time. Nominations, in writing and signed by one or more nominators, must reach the secretary (Mr. John H. Wood, 75 Lowther Road, Barnes, London, S.W.13) not later than April 22, accompanied by a statement signed by the nominee expressing willingness to serve if elected. Any business to be included on the agenda of the annual meeting should be notified and received by the secretary twenty-eight days before the date of the meeting (i.e., at the latest April 22). The annual meeting of the Guild will be held at 3 p.m. on May 20.

Sunderland Pharmacists' Revision Course.

—A revision course for pharmacists has been arranged at Carlton Assembly Rooms, Sunderland. Dates, lectures and lecturers of forthcoming lectures are as follows:—

March 29.	{ B.P. vaccines and sera (method of preparation; storage) ...	Mr. Nixon
April 5.	{ Chemical constitution of synthetic drugs Chemical nomenclature ...	Mr. Penman
April 12.	The sulphonamides ...	Mr. Penman
April 19.	{ Disinfectants (mode of action; types in use; chlorophenols, xylene- ols, dyes, etc.) ...	Mr. Nixon
April 26.	{ Official methods of sterilisation Sterilisation of dressings Sterilisation of catgut ...	Mr. Nixon
May 3.	{ Emulgents and emul- sions Method of preparation in the dispensary B.P. Addendum VI ointments ...	Mr. Nixon
May 10.	{ Some B.P. and B.P.C. galenicals ...	Mr. Nixon
May 17.	{ The endocrines (supra- renal, thyroid and parathyroid, pitui- tary, insulin, sex hormones) ...	Miss Winch

CANADIAN NOTES

Canadian Forces' Mepacrine.—More than two million mepacrine tablets were administered to Canadian soldiers in North Africa, Sicily and Italy during the recent malaria "season." Malaria deaths totalled less than 0.25 per 1,000 among the units concerned, but a small number of troops on suppressive mepacrine developed a non-toxic, non-permanent staining of the skin owing to a deposit of dye beneath the surface of the skin.

Canadian Vitamin Capacity.—Post-war Canada will be able to supply vitamins to the British Empire and possibly to half the world, said Dr. Albert E. Cliffe, a Montreal consulting chemist, in an address recently in Montreal. All natural vitamin sources were abundant in Canada. Canadian spruce bark contained 1,000 times more vitamin C than orange juice, and a project for commercial extraction of this vitamin was now under way; parsley and lawn grass were rich vitamin sources not being fully utilised. On the other hand, tomato juice produced in Quebec and Ontario lost much of its high vitamin content in processing.

Canadian Navy's Portable Laboratory.—A portable medical laboratory for ships at sea and isolated bases has been developed by the Royal Canadian Navy's medical research unit. It is now being issued. The "laboratory" weighs about 40 lb. and is about the size of a week-end case. It will enable tests to be made for the diagnosis of patients' conditions at sea and in outposts where no hospital facilities are available; it may be used to determine whether a survivor picked up at sea has suffered internal injuries. A microscope in the kit makes it possible to do bacteriological work. Blood tests may be made, tuberculosis and diphtheria detected, and drinking water purified and tested.

Inter-State Reciprocity Urged.—Mr. E. H. Waldruff (director, Retail Drug Trade W.P.T.B.) urged working towards reciprocity between all colleges of pharmacy in Canada. He was addressing the twenty-fifth Convention of the Ontario Retail Druggists' Association. He said "Some provinces are afraid they are going to be flooded with graduates from other provinces. That can be controlled." He was aware that some provinces considered their standard much higher than others, but he felt that a minimum standard for pharmacy

could be set, and if any college wished extend that standard it would be free to do so. "We talk of isolationism; we say there is no country in the world can stand alone and yet what have we got in Canada? We have nine isolated provinces from the point of view of education."

Canadian Cod-liver Oil.—In an account of the manufacture in the Dominion of cod-liver oil, given in the "Canadian Pharmaceutical Journal" (January 1, p. 8), A. Hale claims that the Canadian oil is well up to the vitamin D standard of the 1935 Addendum to the British Pharmacopoeia and that its vitamin A content varies from 2,000 to 3,000 units per gm. At this level the product is superior to cod-liver oils produced elsewhere. The oils are blended and standardised to a uniform odour, colour, flavour and vitamin A and D contents. At one time it was thought that oil with an unusually high vitamin A potency had a deeper yellow colour than less potent oil, but this is not true of Canadian oil. From strictly fresh livers, Canadian oil is of a bright light yellow colour, and a brownish shade indicates deterioration, resulting from faulty methods of processing or the use of liver not properly preserved.

Parts of By-law Declared Illegal.—In the practice division of the Superior Court of Montreal, recently, Mr. Justice Pierre Casgrain, on a petition presented on behalf of Macy's Drug Stores, ordered the issue of an interim injunction against the city of Westmount, restraining the municipal authorities from giving effect to a by-law passed ordering that drug stores shall close in the city of Westmount at given hours. In the Court of Appeals, on November 11, 1943, a judgment was rendered setting aside the enforcement of the by-law until a hearing in the Superior Court could be held on the merits of its validity. It was held that Macy's Drug Store had made out a *prima facie* case against the by-law and was accordingly entitled to an injunction to stay its enforcement. The Superior Court ruled that, to the extent that the City of Westmount early closing by-law for drug stores restricted the activities of a duly qualified druggist as defined by the Quebec Pharmacy Act, the early closing by-law was illegal and *ultra vires*. Parts of the by-law which infringe upon the druggist's right to sell articles permitted to him under the Pharmacy Act were accordingly struck down from the by-law by the court.

TOPICAL REFLECTIONS

Entropy

For the Walker memorial lecture at Edinburgh, Professor Joel H. Hildebrand selected as his subject "Entropy Relations in Pure Solvents and Solutions" (p. 303). The lecturer, we read, identified entropy with "degree of disorder." The definition of and note on entropy (a word popularised by Clausius in 1865) in the Shorter Oxford English Dictionary are too lengthy for quotation here; but the identification established by Professor Hildebrand is terse, suggestive and etymologically rational, as anyone with a smattering of Greek will recognise. Entropy as thus defined may be found in many walks of life. It is discernible, not to say conspicuous, in advertisements appearing in the daily Press. One begins to read a narrative purporting to follow up a conversation to its natural conclusion, only to arrive at a recommendation of some unrelated product—a product that possibly not one reader in a thousand would think of buying or hiring. The competing claims of Government departments and those of local authorities afford further examples. It is pertinent to glance at our own spheres of influence, and to ask if all is as it should be in the relations of pharmaceutical organisations with each other and with associated professions and trades. Faced with the "giants" named by Sir William Beveridge, are these bodies and their executives taking counsel together, looking ahead and planning in a spirit of concord? Or are sectional interests allowed to create mental reservations?

Employing the Qualified

The suggestion of Mr. E. A. Brocklehurst (p. 306) that "a pharmacy should employ one, two, three or more qualified pharmacists according to the number of prescriptions and the amount of turnover each week" follows appropriately on the "all dispensing should be in the hands of pharmacists" on p. 301 of your last week's issue, and on the Brighton 1942 Committee's claim (*C. & D.*, February 26, p. 223) that "all dispensing should be done by pharmacists." Your readers will notice that Mr. Brocklehurst, speaking on behalf of the National Pharmaceutical Union, expressed the view that the time has come to consider insisting on a plan of this kind. It has long been the rule in the West End of London, I believe, that every member of the staff in a pharmacy except the porter or porters should be qualified. The duties of employed

pharmacists under the proposed scheme would, presumably, not be confined to dispensing. At meetings of chemists I have occasionally heard the statement that an unqualified assistant may in some circumstances be worth a higher salary than a qualified assistant. That, surely, can only be the result of insufficient training of the qualified or of his insufficient aptitude for his vocation. For two reasons this question is likely to take on an increasing urgency in the near future. One reason is that the number of prescriptions received when the National Health Service scheme materialises is likely to be much increased; the other is that, on demobilisation, pharmacists from the Forces will have a claim to employment without needless delay.

Customers Who Sample

Difficulties beset those who discourse on professions and trades from an outside standpoint. A scrutiny of Defoe's "The Complete English Tradesman" and of Campbell's "The London Tradesman" by a present-day Austin Dobson would probably show that Defoe had escaped making slips, but Campbell had not. On March 14 "The Times" devoted a light editorial article to the subject of superfluous purchases of pills in pharmacies. To be quite up to date, the writer might preferably have selected compressed tablets, which on the evidence of current formularies take precedence over pills and capsules. (The last-named have acquired fresh prominence through the vogue for vitamins.) The main thesis of the article is that certain members of the shopping public are so attracted by displays of bottled pills that "they take one of these and two of those almost at random." "It is hard," the writer continues, "to say why, unless they have, unduly starved within them, a passionate love of adventure and of magic . . . the most sceptical and prosaic will scarcely deny that there is something magical about a pill." Assuming, however, that bottles of pills are conspicuously displayed in shops, the question is whether the suggestion that the habit of promiscuous purchase is common accords with general experience. One would have thought that it was limited to a few eccentrics. Hypochondriacs and neurotics may be considerable purchasers of medicine; but instead of taking samples "almost at random," they consume an inordinate amount of time in relating their symptoms and seeking advice.

Xrayser

LEGAL REPORTS

Appeals against Conspiracy Sentences.—The Court of Criminal Appeal, London, dismissed, on March 13, appeals by Phillip Jacobs, Henry S. Carr and William L. Fairhurst against convictions at Liverpool Assizes on November 13, 1943 (see *C. & D.*, November 20, 1943, p. 508) on charges of conspiracy to contravene orders regulating the prices of goods. Mr. Justice Humphreys, who gave the Court's judgment, said the accused had maintained that they did not know the terms of the appropriate Orders, but ignorance of the law was no excuse. It had been said that the appellants were innocent buyers: it would be more correct to describe them as buyers ignorant of matters it was their duty to know and about which the slightest inquiry would have resulted in their enlightenment.

Fumes in Glucose Factory.—At South-west London police court, on March 2, Garton, Sons & Co., Ltd., were summoned for failing to take all practicable measures to protect persons employed by them against inhalation of a fume likely to be injurious to them; they pleaded not guilty. An inspector of factories, who prosecuted, said that in the main process carried out in the factory maize was steeped in water containing sulphur dioxide. In normal times ventilation provided would have been adequate to dilute the sulphur dioxide, but as the blackout interfered with ventilation he suggested that mechanical ventilation was necessary. Since the prosecution had been instituted a contract had been signed to provide mechanical ventilating fans. A medical inspector of factories gave evidence that in the starch table room he found the atmosphere irritating and offensive, in the separator room almost irrespirable. Albert Berry (chairman and managing director of the company) said he had been associated with sulphur dioxide for more than forty years and his health had not suffered. For forty years all the men under his control had been better in health through contact with sulphur dioxide. A fine of £2 2s. with £5 5s. costs was imposed.

Dangerous Drug Offence.—At Southport police court, on March 20, Bernard Fyans, M.P.S., Lord Street, Southport, was summoned for failing to make an entry required under the Dangerous Drugs Order, 1937, and for failing, under the same Order, to mark on a prescription the date of each occasion on which it was dispensed. Defendant pleaded guilty to both sum-

mons. A police officer stated that, when a call was made at Fyans' premises, it was found that a diamorphine preparation supplied on prescription had been 'correctly' entered in the prescription book but not recorded in the Dangerous Drugs register. Fyans had also failed to record the date of a second dispensing of the prescription. For the defendant it was represented that the offence was not a serious breach of the law; the prescription had been properly entered in the prescription book, providing evidence that the drug had been supplied. The chairman stated it was obvious that there had been some carelessness. Defendant was fined £10 on each summons.

Alleged Cure for Drink Habit.—A Birmingham police court, recently, Carlton Chemical Co., Ltd., Guildhall Buildings, Birmingham, were fined a total of £30, with £31 10s. costs, for selling substances recommended as medicines without describing on the container the ingredients of which they were composed. Defendants pleaded guilty. The prosecution arose out of the sale of a preparation called Dipsocure, which purported to cure excessive drinking, and of preparations Carlton A and Carlton B which purported to cure excessive smoking. Prosecution represented that the whole business really rested upon advertising. Defendants advertised largely in the news papers, and invited people to write for particulars of treatment of the drink and tobacco habits. When people sent name and addresses in reply, the company sent out advertising matter and forms to fill up. In the literature stress was laid, not merely upon the moral evils of excessive drinking but upon the physical evils which the habits brought. Defendants went even further, because they claimed that it could be administered by one person to another, say a wife to her husband, or a husband to a wife, in tea or coffee, without the knowledge of the patient who was going to consume it, thus eliminating all question of auto-suggestion or psychological healing. Submitting certificates of the results of analysis, prosecuting solicitor said: "These things are sent out to people who supply no particulars of their physical condition. . . . The defendants know nothing about that, and they invite people to put into their systems all these drugs." For the defence it was stated that the offences had been committed accidentally; they would not have been committed at all had the printed labels been delivered in time.

COMPANY NEWS

MORAY & Co., LTD. (P.C.).—Capital £1,000. Chemists, druggists, etc. Directors named.

ORIDERM, LTD. (P.C.).—Capital £100. Cosmetics, oil and colourmen, etc. Joseph Baker, director. R.O.: North British Buildings, East Parade, Leeds, 1.

T. CHEMICALS, Ltd. (P.C.).—Capital £100. Manufacturers of and dealers in chemicals, drugs, etc. E. Stekel, director. R.O.: 17 Folgate Street, London, E.1.

COASTAL LABORATORIES, LTD. (P.C.).—Capital £1,500. Wholesale and retail chemists, etc. Frederick A. Hunt and Guy Strange, directors. R.O.: 142 The Grove, Stratford, London, E.15.

CINASP, LTD. (P.C.).—Capital £2,000. Manufacturers of and dealers in chemicals, drugs, etc. Sidney Pigott and Marianne E. Bentley, directors. R.O.: 36 Shambles Street, Barnsley, Yorks.

FERNDALE CHEMICAL Co., LTD. (P.C.).—Capital £500. Manufacturers of and dealers in chemicals, toilet requisites, etc. Hilton and Irene E. Mantle, directors. R.O.: Bank Buildings, 1-3 Taff Street, Pontydd, Glam.

MORGAN & Co. (MARKET DRAYTON), LTD. (P.C.).—Capital £1,500. Pharmaceutical and manufacturing chemists, opticians, etc. Arthur Walters, Mrs. Clara Walters, and Clifford H. Morgan, M.P.S., directors. R.O.: 26 Shropshire Street, Market Drayton.

HOLMES MARTIN & Co. (SELLING AGENCY), LTD. (P.C.).—Capital £1,000. General agents, merchants, manufacturers of and wholesale and retail dealers in chemical products, etc. Directors to be appointed. Directors: Alfred Kerstein & Co., 3-4 Clements Inn, London, W.C.2.

MILTON ANTISEPTIC, LTD.—Dividend is announced on ordinary shares of 12½ per cent. (same as last year).

F. W. HAMPSHIRE & Co., LTD.—A final dividend of 20 per cent., together with a bonus of 10 per cent., on the ordinary and ordinary shares has been recommended, making 50 per cent. for the year.

UNITED GLASS BOTTLE MANUFACTURERS, LTD.—Net profit for the year 1943 amounted to £203,276, compared with £194,752 in the previous year. A final dividend of 6 per cent., together with a bonus of 2½ per cent., will again be paid on the ordinary shares,

bringing the total payments for the year up to 12 per cent.

BORAX CONSOLIDATED, LTD.—Trading profit for the year ended September 30, 1943, including income from subsidiary and associated companies, and revenue from investments, amounted to £679,760, compared with £651,942 in the previous year. Dividend on deferred ordinary stock is 7½ per cent. (same as previous year).

PARLIAMENTARY NEWS

Bananas for Coeliac Disease.—Mr. Mabane (Parliamentary Secretary to the Ministry of Food) stated in the House of Commons on March 9 that arrangements were being made to import bananas in dried form to provide all approved cases of coeliac disease with the supplies they need.

Weights and Measures.—Sir A. Knox asked the President of the Board of Trade on March 9 if he would consider the possibility of extending the Weights and Measures Act of 1926 to cover wholesale transactions as well as retail. The Parliamentary Secretary to the Board of Trade, in reply, said they could not undertake to introduce legislation on this subject under present war conditions, but the matter would be considered at the next general review of weights and measures.

Health in Scotland.—The Secretary for Scotland, in presenting the Department's estimates before the House of Commons on March 8, stated that there was a definite improvement in the health value of Scottish diets, the annual intake of some of the important vitamins and minerals being now over 20 per cent. higher than in pre-war years. Over 25 per cent. of children attending school were given a nutritious midday meal. No medical or scientific expert could doubt that, if the Government plan were continued, it would have the consequence that anæmia would be less common; there would be fewer premature and still births, less rickets and a decrease in other nutritional diseases; better growth and development in children; better teeth and vision; increased resistance to diseases; and a longer expectation of life.

CLOSED ON SATURDAYS.—Advertisers and subscribers are reminded that owing to war conditions the Head Office of THE CHEMIST AND DRUGGIST, 28 Essex Street, London, W.C.2, is closed on Saturdays until further notice. Urgent instructions relating to advertising and subscriptions should be sent to the C. & D., 17 Argyle Street, Bath, Somerset.

TRADE NOTES

Dry Cleaner.—Beaucaire Laboratories (proprietors, Punica, Ltd., London, S.W.8) invite applications to act as distributors for Beaucaire dry cleaner.

Veterinary Speciality.—Lofthouse & Saltmer, Ltd., Hull, draw attention to their preparation, Losall's foot-rot ointment, prices of which are given on another page.

Laboratory Ware.—Jules Lang & Sons, London, N.1, offer laboratory ware, hydrometer jars, funnels, Petri dishes, etc., a list of which may be obtained from the makers.

Special Offer during April.—Optabs, Ltd., Bradford, Yorks, are making a special offer of astringent eye-lotion liquid during the month of April. Full details are given in an announcement elsewhere in this issue.

Hæmorrhoidal Suppositories.—For the treatment of anal fissure, painful hæmorrhoids, and other proctological conditions, Ciba, Ltd., The Laboratories, Horsham, Sussex, have introduced Nupercaine suppositories, each containing 0.012 gm. Nupercaine base, in boxes of five suppositories.

Easter Closing.—British Schering, Ltd., 185 High Holborn, London, W.C.1, announce that their office and warehouse will be closed from Thursday evening, April 6, until Tuesday morning, April 11. Urgent requirements may be obtained from John Bell & Croyden, 50 Wigmore Street, London W.1.

Domestic Antiseptics.—Boon Doral, Boon skin salve, and Boon skin emulsion are antiseptic products manufactured by P.A.C. Chemicals, Ltd., Epsom, Surrey, and distributed by S. Maw, Son & Sons, Ltd., New Barnet, Herts. The salve is packed in 2-oz. jars and the other two preparations in 4-oz. bottles.

Staff Dance.—The annual staff dance of M. Calthorpe & Co., Ltd., Osset, Yorks, manufacturers of Vironita, was held at Osset Town Hall on March 10. Directors and friends had provided prizes in aid of the Red Cross and St. John Prisoners-of-War Fund, and a considerable sum was raised for this cause.

Business Change

MR. JOHN J. F. MERRY, M.P.S., 21 Highburgh Road, Glasgow, has purchased the pharmacy carried on at 1731 Maryhill Road, Glasgow, by the late Mr. Joseph McGowan, M.P.S. The business will be carried on under the name of J. McGowan.

COMING EVENTS

Notices for inclusion under this heading should be sent in time to reach the Editor at Bath not later than Wednesday morning of the week of insertion. Secretaries are advised to send copies of printed programmes of local activities so soon as they are completed.

Sunday, March 26

MANCHESTER PHARMACEUTICAL ASSOCIATION. Ramble to Hope and Bamford. Meet Central Station, 8.30 a.m. Book Hope return.

Monday, March 27

TEES-SIDE BRANCH, PHARMACEUTICAL SOCIETY. Cleveland Technical Institute, Middlesbrough, at 6.45 p.m. Annual general meeting.

Tuesday, March 28

ABERDEEN PHARMACEUTICAL ASSOCIATION. Caledonian Hotel, at 7.30 p.m. Annual meeting. Discussion on "The White Paper."

BRIGHTON AND HOVE ASSOCIATION OF PHARMACISTS, and Branch, Union Church Institute Hall, Queen Square, Brighton, at 7 p.m. Dr. E. W. Godding on "Night Vision."

NOTTINGHAM BRANCH, CHEMICAL SOCIETY. University College of Nottingham, at 6 p.m. Dr. F. G. Mann on "Some Aspects of the Organic Chemistry of Phosphorus and Arsenic."

Wednesday, March 29

CHEMISTS' DEFENCE ASSOCIATION, LTD., 5 Queen Square, London, W.C.1, at 12 noon. Annual meeting.

NATIONAL PHARMACEUTICAL UNION, 4-5 Queen Square, London, W.C.1, at 12.30 noon. Annual meeting.

Thursday, March 30

ROYAL INSTITUTION, 27 Albemarle Street, London, W.1, at 2.30 p.m. Mrs. Katharine Lonsdale, D.Sc., on "Diamonds—Natural and Artificial."

Saturday, April 1

BRITISH ASSOCIATION OF CHEMISTS, Burlington House, Piccadilly, London, W.1, at 2.30 p.m. Professor R. G. W. Norrish, F.R.S. (president), on "Chemistry and the Community."

Anglo-Canadian Pact.—Mutual-aid agreements have recently been concluded between Canada and the United Kingdom, with subsidiary agreements between Canada and the Soviet Union and Canada and Australia. The Anglo-Canadian agreement contains a declaration on post-war trade policy, which follows the lines of the Lease-Lend master arrangements. The parties undertake to pursue international economic policies designed to carry out the economic objectives of the Atlantic Charter.

MARRIAGE

PINDER—ARMSTRONG.—At St. Paul's Church, Jarrow-on-Tyne, recently, Flight-Lieutenant Neville Vincent Pinder, R.A.F., Heroe, Lincs, to Private Marjorie Ethel Armstrong, A.T.S., only daughter of Mr. Robert Armstrong, M.P.S., Ellison Street, Jarrow-on-Tyne.

DEATHS

CATTON.—On March 1, Mr. Ernest Joseph Catton, M.P.S., 7 Vernon Grove, Eccles, Lancs, aged eighty-six.

COUTTS.—At 250 Crown Street, Glasgow, on March 13, Mrs. Isabella Sneddon Coutts, wife of Mr. John Coutts, M.P.S., 5 Gallowgate, Glasgow.

DUNCAN.—At Elgin, Morayshire, on March 12, Mr. William Duncan, 516 High Road, Tottenham, London, N., aged twenty-seven. Mr. Duncan qualified as a chemist in 1889. For twenty years a manager of Boots, Ltd., in Tottenham, Mr. Duncan was also in business for himself at different times in London and Elgin.

JONES.—On February 15, Mr. John Lee Jones, M.P.S., 96 Albany Road, Cardiff, aged seventy-two.

McBRYDE.—On February 17, Mr. James McBryde, M.P.S., 34 St. Botolph's Street, Manchester, aged sixty-eight.

MORRIS.—On March 3, Mr. Thomas John Morris, M.P.S., 165 Priory Road, London, E.8, aged fifty-nine.

NANCARROW.—On February 20, Mr. Samuel Nancarrow, Perranporth, Cornwall, aged sixty-three. Mr. Nancarrow qualified as a chemist and druggist in 1903.

REID.—Suddenly, on returning from a meeting recently, Mr. H. B. Reid, M.P.S., High Street, Wick, aged fifty. Mr. Reid was an officer in the local Sea Cadet Corps.

ROWE.—On February 18, Mr. John Westaway Rowe, M.P.S., 35 High Street, Westminster, aged seventy-four.

SELDON.—On March 7, Mr. Richard Seldon, M.P.S., 43 Watling Avenue, Burnt Oak, Edgware, Middlesex, aged forty-nine.

SPICER.—At Sawston, Cambridge, on March 11, Mr. Henry Gage Spicer, J.P., chairman of Spicers, Ltd., and associated companies.

TURNER.—At Billacombe, near Plymouth, recently, Miss Jane Pierpont Turner, last survivor of the family of the late Mr. Samuel Blandford Turner, Ph.C., Union Street, Plymouth, aged eighty-eight.

PERSONALITIES

MR. A. W. DANIEL, M.P.S., Collier Row, Romford, has been elected captain of the Hainault Forest Golf Club.

MR. A. C. WOODCOCK, M.P.S., Dorking, Surrey, gave a talk to the local rotary club recently on "Being a Chemist."

MR. NORMAN CARTER, a partner in the firm of Carter Bros., manufacturing chemists, Shipley, Yorks, has been elected to represent Shipley on the West Riding County Council.

MR. I. R. BALL, M.P.S., Willoughby Street, Nottingham, was installed W.M. of the Duchess of Portland Lodge of Freemasons No. 3570 in the presence of eighteen fellow pharmacists (ten of them members of the Lodge) on March 16.

PILOT-OFFICER T. W. LIVESEY, R.A.F., sales manager of Cephos, Ltd., Blackburn, recently, at a dance for war charities, made the highest bid for a "mystery parcel" put up to auction, only to find when he opened it that it was an outsize of one of his own company's products.

MR. GEORGE MERCER, a member of the Pharmaceutical Society of Northern Ireland, writing from the Royal Naval Auxiliary Hospital, Colombo, Ceylon, where he is engaged as a pharmacist, says he thinks of setting up business abroad after the war. He mentions that the C. & D. Export Supplement attracts attention out there.

AIR VICE-MARSHAL W. ELLIOT, C.B., C.B.E., D.F.C., who has been appointed Air Officer Commanding R.A.F. Station, Gibraltar, is a grandson of the late Mr. James Noble Davidson, Ph.C., founder of the business of Davidson & Gray, wholesale chemists, Dundee, and a nephew of Mr. G. Graham Davidson, manufacturing chemist, Edinburgh.

RECENTLY-APPOINTED Fellows of the Royal Society include Sir Jack Drummond (Professor of Biochemistry, University College, London, and Chief Scientific Adviser to the Ministry of Food); Mr. W. O. Kermack (Research Chemist to the Royal College of Physicians, Edinburgh), who is distinguished especially for his contributions to the chemistry of alkaloids and synthetic therapeutic compounds; and Mr. G. F. Marrian (Professor of Medical Chemistry, University of Edinburgh), who has carried out distinguished work on the biochemistry of the female sex hormones and related substances.

INQUESTS

Laughing-gas Addict.—At an inquest on a hospital porter at Norwich, recently, the coroner recorded a verdict of death from misadventure. Deceased was stated to have become addicted to taking whiffs of nitrous oxide; he died from an overdose.

Suicide Verdicts.—At Walsall, recently, a verdict of suicide was returned on Sidney Howard Dixon, Walsall, who died after swallowing three-quarters of a tin of Rodine rat poison.—A similar verdict was passed at Leamington on Jessie M. Smith, who died after swallowing eighty aspirin tablets.

Lysol Mistaken for Medicine.—At East Ham, London, recently, a verdict of death from misadventure was returned on Mrs. Emily Carter, Forest Gate, aged eighty-one, who died in hospital after she had taken lysol in mistake for medicine. The coroner commended the frankness of Mrs. Carter's daughter, who explained that the lysol was in a plain instead of a poison bottle, but said nothing could be more foolish than to keep poison in an ordinary medicine bottle.

Auto-injections of Heroin.—At Hammer-smith, London, recently, an open verdict was returned on Mrs. Irene Marguerite Sneyd, who was found dead in bed with a hypodermic syringe beside the bed. A housekeeper gave evidence that her mistress was in the habit of giving herself injections of heroin, which she obtained from chemists on prescription. Evidence by the Home Office analyst was to the effect that death was due to an overdose of barbitone; he did not think an overdose of heroin had been taken, although it was evident that Mrs. Sneyd was addicted to the drug.

WILLS

MR. JOSEPH LOW, M.P.S., St. Augustine's Avenue, South Croydon, Surrey, left £1,220, with net personalty £1,109.

MR. GEORGE WILLIAM MARR, M.P.S., 15 Highfield Road, Doncaster, Yorks, left £518, with net personalty £487.

MR. JOHN BERTRAM WILSON, M.P.S., 95 North Street, Gosport, Hants, left £8,321, with net personalty £7,294.

MR. JOHN COOKE THOMPSON, M.P.S., 289 Marton Road, Middlesbrough, Yorks, left £13,787, with net personalty £8,716.

MR. GEORGE HENRY GREGORY, 295 Filey Road, Osgodby, Scarborough, Yorks, left £4,928, with net personalty £4,855.

DR. EVAN MATTHEW RICHARDS, M. Ph.D., B.Sc., Arne, Dudswell, Berkhamstead, Herts, left £805, with net personalty £725.

MR. JAMES HERBERT EVERETT EVANS, St. Asaph, Denbigh, chairman of Evans & Sons Lescher & Webb, Ltd., manufacturing chemists, Liverpool, left £4,669, with net personalty £1,690.

TRADE MARKS

(From "The Trade Marks Journal," February 1925.)

"TIMBRENE"; for wood preservatives (2). By Francis F. Fox & Co., Ltd., Little George Street, St. Judes, Bristol, 2. 625,812.

"MEDIGREE"; for non-medicated toilet preparations (3). By D.D.D. Co., Ltd., 3 Fife Lane, London, E.C.4. 625,674.

"DEXIM"; for pharmaceutical saline preparations (5). By the Harrogate Tablet Co., Ltd., 11 Princes Square, Harrogate. 625,367.

"BIOTOX"; for insecticides and vermin killers (not for human use), and for fungicides, weed killers (5). By Biotox Manufacturing Co., Ltd., 5 Dartmouth Place, Dartmouth Road, Dublin. B625,497.

"AVIASOL" and "AVIASAN"; for pharmaceutical preparations and substances (5). By H. R. Napp, Ltd., 3 and 4 Clements Inn Kingsway, London, W.C.2. 626,166 (Associated).

"SERODEN"; for pharmaceutical preparations and substances (5). By Allen & Hanbury Ltd., Plough Court, 37 Lombard Street, London, E.C.3. 626,285.

(From "The Trade Marks Journal," March 1925.)

"WY-DA"; for non-medicated toilet preparations, etc. (3). By Wyedale Products, Ltd., Perfumeries, Dock Road, Lytham, Lancs. 626,015.

"PROTEX"; for non-medicated toilet cream for the hands (3). By W. S. Shepherd, Ltd., Cassland Works, Bramshaw Road, London, E.9. 626,276.

"FRIGOL"; for pharmaceutical substances and preparations for internal human and veterinary use, and for sanitary substances and disinfectants (5). By Frigonia, Ltd., 35 New Broad Street, London, E.C.2. 624,001.

"BLACKPOOL TOWER BRAND" on label device incorporating tower and name and address of applicants ("Blackpool" disclaimed); for disinfectants (5). By H. Heywood & Co., Hopwood Works, Little Bank Street, Oldham, Lancs. 625,613.

"VALKEM"; for cod-liver oil, cod-liver oil and malt, medicinal olive oil, and infants' and invalids' foods (5). By Unichem, Ltd., 2 Upper Tooting Road, London, S.W.1. 626,217 (Associated).

"DEODEW"; for disinfectants (5). By Deodew Silkwear Protection, Ltd., Forfar Works, Spencer Road, Belper, Derbyshire. 626,341.

"PLASMORIL"; for sutures and suture material for surgical purposes (10). By The Medical Supply Association, Ltd., 167-73 Gray's Inn Road, London, W.C.1. 626,095.

STANDARDS FOR POST-WAR PHARMACIES

views of a representative cross-section of pharmacists on the equipment necessary to enable pharmacists to provide a complete dispensing service under any national health scheme.

THE Government's White Paper on "A National Health Service" (see *C. & D.*, February 26, pp. 233-39), is declaring that the existing system for supply of drugs under National Health Insurance had worked on the whole with success, added: "In detail the system is no doubt capable of improvement."

Vital Topic

The subject is one to which chemists have already given some thought, for when the Council of the Pharmaceutical Society and the Executive of the National Pharmaceutical Union, with the Pharmaceutical Dispensing Committee for Scotland, submitted to the Minister of Health proposals for organising a pharmaceutical service within a national medical service, they suggested the creation of a Pharmacy Commission, among whose powers should be the setting of "standards for individual pharmacies, including stocks, staffing and accommodation." In deciding what those standards should be, such a Commission, if its equivalent, would inevitably be governed by the consensus of opinion among practising pharmacists. The views of one member of the Society (Mr. W. H. Stott) were made known at an early juncture. Speaking at the Branch Representatives' Meeting in June 1943, he suggested that the new pharmacies would need to be equipped with an autoclave, a complete set of scientific books, a refrigerator for storing vaccines and sera, and so on."

In order to ascertain what was the general viewpoint on this important topic, the Editor sent out a questionnaire to pharmacists selected to provide a representative cross-section of the Society's membership, and it is hoped that publication of the findings will stimulate further interest, particularly in view of the present fluid state of the relations between the profession and the Government.

Opportunity Welcomed

The vast majority of the replies gave evidence of the continued enthusiasm and deep feeling for their calling evinced by pharmacists. Notes such as "It is a subject about which I have very strong views"; the framing of the necessary data proved a very pleasurable occupation and incidentally provided one with much valuable food for thought"; "I have always had

ideals of what a pharmacy should be" were numerous, and there was only one expression of regret at the circularisation of the questionnaire. This was from the secretary of a local Association who wrote "It cannot serve a useful purpose, but it could suggest to the uninformed that the pharmacist has hitherto neglected to equip his premises to meet the dispensing requirements. The actual position is that very few pharmacists neglect to purchase and install such equipment as local demand makes necessary, and that he would and does acquire any additional improvement that progressive medicine may demand." It was precisely because the Editor shared the view expressed in the second sentence of this statement—except that he would add "and his remuneration permit"—that he sent out the questionnaire. The replies received certainly do not suggest that pharmacists generally have any fear that the effect of the questionnaire will be to prejudice their status or goodwill with the public—in fact, they suggest it will be of positive value.

The Questions

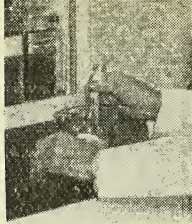
Recipients of the questionnaire were asked to answer five questions. The first four were:—

1. On what maximum number of prescriptions per dispenser per week do you consider any national pharmaceutical service should be based?
2. What minimum area of bench space per dispenser do you consider essential?
3. Do you consider it desirable that dispensaries should be of the "open" type (i.e. with compounding operations visible to customers)?
4. Do you consider it necessary to provide a waiting room independent of, or separate from, the pharmacy itself?

The fifth asked pharmacists to mark which of a long list of apparatus and equipment they considered necessary for providing the public with an adequate pharmaceutical service, and invited them to add further suggestions of their own.

Output per Dispenser

Opinions differed surprisingly on the question how many scripts a dispenser should handle in a given time. In a sense this was to be expected. Where the proportion of pills is high, obviously the number of prescriptions dealt with is lower, while an occasional prescription for a

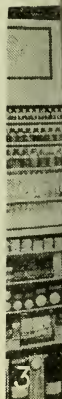


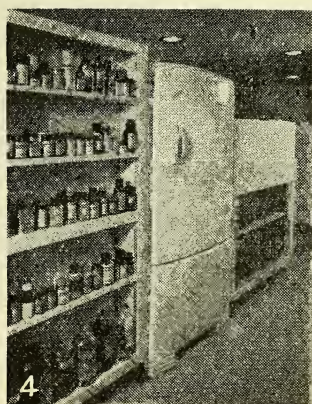
MODERN CANADIAN DISPENSARIES

1. Dispensary at Macy's pharmacy, Montreal.
2. Main dispensary of T. Eaton Drug Co., Toronto
3. Semi-open dispensing screen combined with showcase.
4. Built-in refrigerator.
5. Even in Canada congestion is occasionally encountered.



2





plaster can have quite a profound effect on the average output. Nevertheless, in the experience of most contractors, mixtures have provided overwhelmingly the greatest proportion of medicines dispensed under the N.H.I. scheme. The variation revealed by the answers to the questionnaire was so great as to point to differences of prescribing standards according to district rather than to differences of pharmaceutical skill.

Looking to the Future

Many correspondents answered on the basis of existing conditions, but the question needs to be asked whether future standards should not be made compatible with full individual attention to every prescription. Since the White Paper stipulates "the best medical and other facilities available" it would be unwise to accept conditions which compel the use of stock mixtures or other similar expedients to increase output. It is doubtful whether the 6 per cent. who suggested over 500 scripts per week, or the 16 per cent. who put forward 400-500 as the standard, were looking to the future so much as being influenced by the past. On the other hand, the correspondent who remarked that "over 150 scripts require a second dispenser" had certainly in mind a pharmacist who would be called upon to spend a good deal of time at the shop counter. As a reasonable mean between the two extremes the majority figure of 250-350, admitting the use of stock mixtures where not undesirable, or 200 without stock mixtures, is probably a good criterion. There were rather over 40 per cent. of recordings for the former and rather under 40 per cent. for the latter. A detailed comment was "Our experience is that one dispensary can dispense about fifty-five prescriptions per six-hour dispensing period, with eight-hour day worked and two hours allowed for necessary dispensary work other than dispensing, and for interruptions. Our experience is that mixtures take more than ten minutes far more often than is realised. 'Messy' ointments take fifteen to thirty minutes."

National Differences

Another correspondent wrote: "I consider the equivalent of four hours' continuous dispensing is enough for anyone." This is a moderate view, with which many will agree, and it may be supposed that the person who wrote: "In Scotland (where dispensing is extemporaneous), 350; in England, 500," had in mind a dispenser

concentrating on compounding, with somebody else to take charge of the other tasks that are inevitable even in the dispensary.

Bench-room

Opinions on what amount of bench space is necessary or desirable for a dispensary had to be considered in relation to what they were intended to include. Some correspondents gave figures for actual working space, others for a length of bench that included a desk at least, a sink perhaps, and possibly room for pharmaceutical but not strictly dispensing operations. Here the measurements given included even a step down from 9 ft. to 3 ft. Allowing for the fact that some dispensers like to spread themselves more than others, the range from 4 ft. to 6 ft. would appear to include the ideal length of counter per person, and the prevailing conception of correct depth was 18 in. to 2 ft., giving a superficial area in the region of 10 sq. ft. of actual working space. It was urged by some that a pharmacy should be staffed by less than two pharmacists. Assuming that this would be working simultaneously for the most part, this requirement would, of course, necessitate reconstruction in many existing premises. Such indispensable features as sinks could be shared (one between each two dispensers). A desk to each worker would, on the other hand, be indispensable to avoid "bottlenecks."

Waiting Room

Although a proportion of readers (about 16 per cent.) considered a separate waiting room essential, and a few others thought it desirable, feeling was on the whole overwhelmingly against. The difficulty of answering a question like this on broad principles, without reference to conditions as they exist today, will be obvious. Allowance must be made for the fact that pharmacists cannot fail to have in mind the immediate practical difficulties of altering their own premises. Nevertheless, if the public interest demanded it, the alteration would have to be carried out, and the public would have to pay. It does not appear from the tenor of the replies that the public complain of hardship in being called upon to wait in a shop instead of in a room specially set apart. Rather the reverse, in fact, for a shop is human and variable. There is always something to attract the eye and hold the interest, while a waiting room can be very institutional and featureless. Some writers have endeavoured to reduce the matter to a quantitative basis

For over 400 scripts a week, Yes"), but the general inference is that, provided there are enough seats, present arrangements are the best, modified only by the provision of a delivery service if the nation requires and is ready to meet the cost. The question called forth less comment than some of the others, but two remarks may be quoted. One of the main advantages of pharmacies over State dispensaries is that waiting can conveniently be avoided. The prescription can be dispensed at a pharmacy near the patient's home, and called for easily at convenience." "Waiting room not necessary, but should one become compulsory would fit it with weighing scales for adults and babies. Also reading matter dealing with health, and adverts for C.F. goods."

Open Dispensary

The open dispensary was not favoured. About 15 per cent. of replies approved some of them not very strongly) but the vast majority of the remainder were emphatic that the effect of adopting such dispensaries would be detrimental to the service. "Conversation with customers while dispensing is a potential source of inaccuracy," and "the practice of pharmacy is not an entertainment" were typical comments. Another correspondent wrote: "I consider this to be unnecessary and undesirable. A patient who could watch dispensing operation in progress would probably want to start a conversation or manifest other interest in a way calculated to be distracting to the chemist. Another objection is that a patient witnessing the dispensing of, say, liq. strych., m. 48, liq. ad 8 oz., might decide that 'there's nothing much in that medicine,' and either lose confidence in the treatment or regard too lightly the directions as to dosage."

The same idea was expressed in the comment, "Open pharmacies would be an advantage if it were possible for the public to be kept sufficiently far away to be able to observe cleanliness and orderliness but not near enough to overlook the actual work or distract attention with conversation." There was a hint in another reply as to how this might be done: by a plate-glass window instead of the usual dispensing screen. One or two who replied were in favour of dispensing being carried out in a room entirely separate from the shop, and no doubt this would be an ideal solution in future premises, but the "closed" pharmacy as it exists in very many shops today achieves essentially the same result, and the most ardent supporter of the separate

room did not suggest that it would be desirable to alter existing premises to attain this object. The strongest view expressed was that switching over to a separate room would be "a good investment." Quite a few correspondents favoured a "semi-open" dispensary—not, so far as reasons were given, to impress the patient, but solely for the purpose of enabling the qualified man in the dispensary to observe what is going on in the shop. It would be true to say that the vast majority of replies made the prime consideration the need for avoiding distractions and interruptions during dispensing.

"I have found the essential question is convenience. It is necessary for the dispensary to be carefully planned, hot water as well as cold water readily at hand, with a deep sink near the dispensing counter, which should be well lighted. I like reflectors. The dispensing counter should be fairly high, with the equipment in the drawers, and shelves under the counter. A room about 12 ft. square, with shelves on three sides, and with D.D.A. and Schedule IV cupboards about 5 ft. 6 in. from floor, and poison cupboards, wet and dry, at about the same height, is excellent."

Equipment

The list of equipment included in the questionnaire was not put forward as a recommendation so much as to form a basis for comment. In this it achieved its purpose, for suggestions and criticisms were freer under this heading than under any of the others, and ranged from dismissing almost the whole list as being "of a cheap and elementary type, essential for every dispensary worthy of the name," to an opposite viewpoint exemplified by the remarks:—

"I have read with interest the list of articles you suggest for the equipment of a pharmacy, and I should be pleased if I could believe that in the near future every pharmacy would require them all (also an infusion pot). If this Utopian dream does materialise, pharmacists will require the utensils without any compulsion. Pharmacies generally are equipped for the work they have to do. Under the new State medical service, the same doctors will be prescribing, therefore we cannot expect any great change in that direction. Until the prescribing improves, most pharmacies certainly could not use much of your suggested equipment."

"Would be most interested to hear suggestion for making pure pharmacy provide

the necessary money to justify a well-equipped dispensary, having regard to present drift towards ready-made factory products."

Items Not Wanted

In the main, the items listed were admittedly elementary and indispensable, but a safeguard against accepting the whole catalogue without detailed consideration was afforded by including in it such items as "lozenge board and cutter." Few correspondents failed to reject this, often with such remarks as: "I have a lozenge board and cutter, but haven't used them in a dozen years." Even the lozenge cutter, however, secured a few votes, and there was one chemist who wrote: "We have recently built and equipped a new dispensing department which incorporates all the above listed by both you and us, and have added a small hot-air oven and fume cupboard." The additional items listed by the writer were two text-books; a pestle and mortar of about 80-oz. capacity; a supply of empty ampoules and suitable syringes for filling them; powder folder; and hot-water apparatus.

In the light of results, it is appropriate to put forward a list of equipment that can be regarded as indispensable in every pharmacy; a second list of items of a more elaborate and expensive character not called for at every shop, but concentrated in a centrally-situated pharmacy in each area; and a third list of apparatus, instruments and appliances which are considered by some pharmacists to be desirable. The minimum list would include such items as dispensing balance; minim and fluid-ounce measures; spatulas; ointment slab, and the like. There is no call to go into full details, because, while there is not 100 per cent. agreement as to what is indispensable, the list varying to some extent according to local circumstances, it may be accepted that "needs will be the best guide to the practising pharmacist."

Centrally-held Apparatus

In discussing the second list, it is necessary to consider three aspects. First, there is the apparatus itself—its variety and capacity and the staff required to handle it. Intimately bound up with this is the size of the district to be served. Finally, there is the question of ownership—should provision of expensive equipment be financed by the State; subscribed for on a co-operative basis by all chemists who may have a call upon the services it makes possible; or left

to the enterprise of a proprietor in each area whose turnover can support the installation, and to whom his fellow-pharmacists can have recourse when necessary?

Agreement is general that one autoclave, with the necessary accompaniments of S. filter, water-pump, Buchner funnel, etc., as well as a refrigerator, should be available, but not at every pharmacy. "Although we have worked where over 2,000 scripts were dispensed," wrote one correspondent, "we have never required an autoclave, refrigerator, water-still, tablet-machine, etc., but the trend of the modern medicine may make them essential." "The number and range of sera to justify a refrigerator would need to be very large," and "Pharmacists cannot be condemned for not equipping their dispensaries with an autoclave under present conditions, but I am convinced that the establishment of the need for use of autoclaves in retail pharmacy, and all that it implies concerning the conducting of sterilisation processes, is not only a logical sequence to our training, but the only hope for the future of those who are increasingly becoming, as Sir Henry I. has said, merely 'intelligent distributors of centrally packed and standardised products,'" were other views.

Are Autoclaves Necessary?

One man writes from actual experience: "Regarding an autoclave, one to every twenty shops, if close to each other, is enough. I have one and have used it twice in three years—note we sell and dispense a large number of ampoules, etc. The use of this item and a refrigerator is much overrated." In fine, there is no widespread demand for autoclaves at present, though the trend is in that direction. It will be too much to expect individual contractors to bear the expense. "The increase in overheads could not be met unless a higher standard remuneration was granted to the pharmacist, or unless only selected pharmacists were included in the scheme."

The consideration governing the number of pharmacies that should share one autoclave are practical ones, depending on density of population, distance, accessibility in minimum time, and local prescribing. Some valuable suggestions have been put forward, and the following may be quoted:—

"The [Cambridge] Branch has advanced what it considers to be a very useful and constructive idea, which I put forward at a Branch Representatives' meeting, which makes possible a first-class service with

minimum of trouble. This is that each area of sufficient size shall have one central dispensary (possibly attached to the main hospital), which is State-run, and not open to the public, but, in the main, to other pharmacists only. This should be equipped with absolute thoroughness, and should supply to chemists on demand technical information and all such out-of-the-ordinary drugs as are required, or preparations such as cannot be easily prepared in a normal pharmacy; the latter would include all sterile material. Such items as special tablets, pastilles, or vaccines would be made on demand. All sera and vaccines, properly prepared, and all injections and unusual proprietary, would be available. Of course such a dispensary would not undertake work which could and should properly be done in an ordinary pharmacy. By this method any pharmacy would be in a position to supply at short notice literally anything that a doctor might require.

"It might be advisable for the more expensive items of equipment to be supplied by the State and remain the property of the Ministry of Health."

Shares Held by Satellites

A similar idea, substituting co-operative for State ownership, is expressed in the view I envisage ten satellite pharmacies grouped around a central nuclear pharmacy staffed with a pharmaceutical chemist with diploma in biochemical analysis, etc. The central pharmacy would give a purely pharmaceutical service. Twenty-four-hour service could be maintained by each of the satellites providing a pharmacist nightly in turn, each going in this way one night in ten. The central pharmacy would be financed by each satellite taking, say, 100 £1 shares." The question turns on finance, and the writer who commented "It is my opinion no Pharmacy Commission or other body should have the power to say what stock must be carried unless they are going to accept financial responsibility for loss. . . . The whole basis of equipment should be bound up with any contract under the panel or any proposed national extension," was expressing a widely shared reaction.

In the "desirable" category were extremely varied suggestions, some of them indicating a particular type of dispensing already being done, and others a commendable effort to provide a service of the utmost efficiency. For the benefit of pharmacists who are always on the look-out for ways of improving their methods, increasing their output of work or preparing themselves for

new classes of scientific assistance to the medical profession, a few of the suggestions are given:—

Hydrometer	Filing system for literature
Bougie mould	Heated towel rail
Injection bottle	Yard stick on edge of counter
Activated charcoal	Stainless steel sink
Instrument steriliser	Mechanical (outboard) stirrer
Tablet counter	Hot-air oven
Blow-pipe	Micro-bunsen burner
Pipette	Hot-water funnel
Electric oven	Swansdown filter-bags
Burette	
Titration flask	
Typewriter for labels	

General Comments

Some of the remarks added to the questionnaire sheets went rather beyond the scope of the inquiry, and there is not the space to deal adequately with them, but a few may be cited as having a general bearing on the facilities given and how they are to be paid for.

"May I congratulate you on the idea, which should stimulate interest and discussion. I do feel that we must not be afraid to aim high. The pharmaceutical service will be required to be A1 and therefore the remuneration must also be A1. The suggestion of £500 per annum as an average is not, I feel, unreasonably high, when compared with remuneration received for other professional jobs; in fact, many jobs of much less importance, and not requiring anything like the knowledge and qualification that pharmacy needs, are remunerated at a better rate than pharmacy."

"Chemists must receive payment on an entirely different basis from the miserable allowance they now get for dispensing."

"Doctors should be at their surgeries at the proper time and not one to one-and-a-half hours after time. A minimum fee to be guaranteed to each shop."

"Medicines and sundries used for illness should be separated entirely from the rest of any of the business if such other business is to be carried on at all. All Chemists' Friends items should be regarded as medicines, other proprietaries classed with toilets, photographic goods, etc. The pharmaceutical side should be essentially for pharmaceutical service and not mixed up with ordinary business."

"A statutory fee of £100 per year should be paid for rent, light, heat, and replacement of equipment, in addition to any fees that would be paid for dispensing."

"Prescriptions should be left and called for at stated hours. The prescriptions

should be paid for on a proper basis, not as a side-line as at present."

"Formulary should be written in abbreviated Latin. A chemist has to translate concentrated camphorated solution of opium, N.W.F., into liquor opii camph. conc. in his mind before he can handle the bottle. The absurd change to English has already wasted thousands of man-hours in pharmacy."

"Manifestly it is of little use having a range of equipment which will not be used, and here lies the problem. In spite of Sir Henry Dale's address, health legislation can only use the instrument at hand. These gentlemen of the medical world are likely to continue using what is, in their view, tried medication for a considerable time to come. . . . It is right to claim that the pharmacist has more than met the demand, apart from the very few with the outlook of marine-store dealers."

"I have given a very adequate dispensing service for years using the equipment noted. I've managed quite well without an autoclave, refrigerator or hand emulsifier. However, I realise that with this additional equipment we could give an even better and more comprehensive service, so these will be installed as soon as conditions become more settled. I have experience of water-stills and find them, on the whole, a confounded nuisance."

Works of Reference

The inclusion of text-books revealed a profound difference of viewpoint among pharmacists. One writer commented, "A qualified M.P.S. should not need these." He was rather the exception, and there was encouraging evidence of wider support for the opinion "No pharmacy is efficient without its books of reference, though it is surprising the number of pharmacists who dispense with their text-books as soon as they qualify, and limp along without them, many times to the detriment of their art."

If all the books suggested by any correspondent were made available, the pharmacist would have a sizeable library. It is only necessary to cite a few of the titles to realise (i) that any attempt to lay down a minimum number of text-books or works of reference for all pharmacies would be a matter of extreme difficulty, and (ii) that pharmacists are, on the whole, alive to the necessity of adding to their library according to the expanding nature of their business or the need to keep abreast of new developments in medicine. Among the volumes suggested by various correspondents as

being among the most desirable as works of reference in a pharmacy were the following:—

Student Prescriber	Dictionary
Pharmaceutical Pocket Book	Work on physiology
Homeopathic Pharmacopœia	Hospital formulary
Dictionary of Medical Terms	Text-book of materia medica and pharmacology
First-aid manual	Text-book of theapeutics
Diseases and Remedies	Dictionary of synonyms
Nursing handbook	Urine Analysis
Treatise on biological products	A copy each of "British Medical Journal" and "Lancet" every week
Aids to Mathematics of Pharmacy	

Summing-up

Taken as a whole, the replies demonstrate two facts very strongly. First—what was never in question—that pharmacies generally are adequately and often more than adequately equipped to meet the demand made upon them under the National Health Insurance scheme as it exists today. Secondly, although the attitude of pharmacists to the subject of equipment is flexible in the sense that they show a readiness to install new apparatus as the need arises nevertheless the extent to which they do this without substantial assistance is restricted to a few minor items, because they suffer from the handicap of inadequate remuneration. There is keenness to carry into effect the principle of the "best possible pharmaceutical service," but with it the realisation that all is not well with the existing system, the chief defect residing in the tying-down of the pharmacist (on narrow margins of pay from the Government) to limitations which tend to prevent any development or improvement of the service provided to patients. When it comes to planning for the future, differences arise, possibly conditioned by the natural pessimism or optimism of the persons concerned.

There are those who, convinced that pharmacy can make a much greater contribution to a public health service if on it is given the opportunity, put forward the shape of their ideal dispensary or laboratory with the claim, in effect, "Let the Government see that we are equipped on this basis and it may be sure of a first-class pharmaceutical service." Others adopt the attitude "Pharmacy today is in step with the medical practice of today. No great immediate change is to be expected in the quarter. Let us meet the changes as they arise." The central dispensary is the point of general agreement.

PRESENT AND FUTURE OF SULPHONAMIDES

Bath Branch of the Pharmaceutical Society met on March 8, under the chairmanship of Mr. H. T. Doble, to hear a lecture by Mr. D. G. Ardley, M.P.S., on "Chemotherapy of Bacterial Infection." Mr. Ardley traced the development of the sulphonamide group of compounds from the announcement by Domagk, in January 1935, of the launching of Prontosil to the subsequent discovery in France that the compound was split-up in the body and excreted as a part in the urine as *p*-aminobenzenesulphonamide—a discovery which frustrated a German attempt to secure a monopoly.

The sulphonamides used in medicine, the speaker, fell into two groups. The first was substitution in the first of an *H* on the amino group and, in the second, of an *H* on the amide group. Compounds in the first group were marketed only for the sake of administrative convenience, and involved no change of therapeutic properties. Those in group 2 were active *per se*. The effectiveness of the sulphonamides in group 2 depended on (1) a susceptible organism; (2) a high initial dose followed by maintenance doses; and (3) a restricted method of administration. The difference between the various sulphonamides was one of degree and not of kind; on no organism was the action specific, the effect being modified by interfering with the metabolism of the infecting organism.

Sulphonamides and Penicillin

After pointing out that the action of the sulphonamides was largely inhibited in the presence of pus, Mr. Ardley made reference to two groups of agents active where pus is present and on sulphonamide-resistant organisms. These were the aromatic diamines, which had the drawback of possessing certain toxicity; and the recently-introduced group of mould compounds exemplified in penicillin, a virtually non-toxic substance, which, unfortunately, was decomposed in the alimentary canal. When a method was devised of producing penicillin as a synthetic compound having similar properties economically on a large scale, sulphonamides would be superseded.

Mr. A. P. CURTIS asked what would be the method of administration of penicillin when it became plentiful, since it was destroyed when administered by the oral route. The reply was that administration could be parenteral or by local application at present.

Penicillin Destroyed by Enzymes

Mr. A. H. HALE inquired as to the possibility of administering penicillin orally in an alkaline medium, but it was pointed out that penicillin was destroyed by gastric enzymes as well as by acids.

Mr. J. ASPELL asked whether a paraffin base would not prevent too great absorption of sulphonamides and thus lessen the danger of applying sulphonamide preparations over large areas of skin. The reply was that paraffin would probably effect some delay, but the main factor would still be the amount of sulphonamide used, and the strength officially recommended for application to large burns was 1 per cent.

A vote of thanks was proposed by Mr. LIONEL WILLIAMS.



RADIUM IN THE NEWS.—Almost simultaneously with the release of a film depicting the life of Madame Curie (co-discoverer with her husband of the element radium) came the news recently that a quantity of radium valued at £3,000 had become buried under debris following bomb damage at the Mount Vernon Hospital, London. 400 mgm., about three-quarters of the total, has since been recovered intact in its lead container. Removal of the recovered radium to the laboratory of another London hospital was supervised by a representative of the National Physical Laboratory, who is seen in the illustration using a "bowser" to locate the mineral. The instrument emits a ticking sound when within range of the radium, and an electroscope confirms the find.

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Fact that goods made of raw materials short supply owing to war conditions are mentioned in this paper or described in its editorial columns should not be taken as an indication that they are necessarily available for export.

Dispensaries of the Future

REPLIES to a series of questions put to selected pharmacists throughout the country by the Editor of THE CHEMIST AND DRUGGIST are reviewed on pages 333-40 in this issue. If the questionnaire had been intended to vindicate the work and high standard of service of pharmacists under the existing National Health Insurance scheme, the object could hardly have been more fully achieved, as the replies show.

Whenever suggestions for future improvements reach uninformed members of the public there is a possibility they may be misinterpreted as indicating something defective or incomplete in the existing arrangements. In particular, to advocate (as one pharmacist did) that future dispensaries should be equipped with autoclaves and refrigerators might suggest that chemists now without such apparatus are inadequately equipped for the service they have to give. Such notions are, of course, misconceived. In counteracting them nothing, to our mind, is so valuable as publicity given to the way in which chemists are meeting their obligations under the N.H.I. scheme. A secondary result of the questionnaire has been to provide information by means of which chemists can

counter any invidious misgivings on the part of their customers. Pharmacists know, of course, that to install autoclaves or refrigerators at present would be (a) impracticable, (b) uneconomic, and (c) unwarranted by present-day requirements. It is accepted that remuneration for N.H.I. dispensing is inadequate to cover even existing establishment charges, and that the facilities provided and the services rendered are, to a considerable extent, subsidised by other sections of the business, such as the sale of proprietaries and toilet preparations. There have been instances of pharmacists installing costly apparatus with a view to meeting demands which they hoped would arise in their private dispensing practice. The recorded comments of one or two such pharmacists show that these hopes have not been realised and their capital has been tied up without return from private dispensing, let alone from National Health Insurance. Faced with a drastic reduction in private dispensing under a national medical service, these chemists may have to reconcile themselves to what will virtually be a dead loss on the apparatus concerned, unless there is a change brought about by improved standards of treatment, or unless chemists in the locality make an arrangement for joint use of such equipment.

Trend of Pharmaceutical Service

The main purposes of the questionnaire were, however, not negative but positive. In the first place, it was intended to get together a highest common measure of agreement on what are the trends of pharmaceutical practice today, and what equipment will be necessary to meet changing demands. Secondly, it was to give pharmacists an opportunity of offering suggestions on how, outside their actual obligations, they can give effect to the ideals which it is clear so many of them possess. If it had been possible to contact every pharmacist on the Register we should naturally have wished to do so. Unfortunately, this could not be done, and it may be that, after reading the summarised replies, many other pharmacists will be prompted to air their views or make suggestions which are not among those recorded. If so, their opinions and experiences will be welcomed, and it is

hoped in due course to put forward designs for something in the nature of a "pre-fabricated" or "unit" dispensary on thoroughly up-to-date lines. In this connexion, the illustrations of Canadian dispensaries will be examined with interest, especially since, on account of the war, little recent progress has been possible in the fitting of dispensaries in this country. Even so, many pharmacists may consider their dispensaries worth illustrating for the benefit of craftsmen in other parts of the country. If so, the Editor will be pleased to receive photographs for publication.

Best Possible Service

It is to be borne in mind that the questions were sent out—and most of them answered—before the Government's White Paper on a National Health Service made its appearance. In the light of the Government's proposals there is surprisingly little which needs to be altered in the recommendations put forward, but it must be said that, if the Government intends to provide "the best possible medical service for every citizen," then there are three points that must be emphasised.

1. Pharmacists have carried out their N.H.I. contracts in a manner which has earned the Ministry's praise.

2. Existing facilities, which have been adequate for N.H.I. requirements, will need to be expanded to provide an efficient pharmaceutical service for the proposed all-embracing health scheme.

3. "The best possible medical service" will make many new demands upon pharmacists for which an altogether higher standard of remuneration will be called for.

Urine Analysis

THE present trend towards a more ethical outlook in pharmacy leads to a review of the possibilities of additional professional services that can be rendered by the chemist. Under present conditions, many doctors are fully engaged in purely medical work and would welcome some assistance from the pharmacist, especially in the less-complicated routine laboratory procedures necessary for accurate diagnosis. A good example of this type of auxiliary work is urine analysis, and no class of men is better

fitted to perform this function than pharmacists. It is well within the scope of existing equipment and average professional skill, but a good and practical book, covering in a workmanlike manner the principal aspects of the subject is essential.

An Up-to-Date Guide

For some years such a work has been available for the pharmacist's library in the selection of technical books published by THE CHEMIST AND DRUGGIST, under the title of "Practical Methods of Urine Analysis," a new revised edition of which (the fifth) is now ready. Expressly written for pharmacists, the C. & D. "Urine Analysis" is an up-to-date guide for the chemist who wishes to take a serious, but not too serious, interest in this subject. The book is essentially practical and does not enter into speculative matter. Nor does it trouble the beginner with obscure urinary ingredients of ill-defined or doubtful import, as is believed that those who become exceptionally expert in urine analysis, and wish to carry their experience further, will find it advisable to consult the more pretentious works which are written for medical practitioners.

Illustrations of Urinary Deposits

Particular attention has been given to the illustrations of urinary deposits, which are shown in their characteristic shapes in such a way that recognition, often a difficult matter when attempted by the inexperienced, is rendered comparatively simple. Chapters are devoted to urine in health and disease, covering composition, collection of samples, preservatives, reaction, etc.; under clinical analysis of urine, urea testing and estimation is described, together with uric acid and other nitrogenous and non-nitrogenous constituents. The analysis of abnormal constituents and microscopical examination each has a chapter, while the spectroscope and polariscope are described under optical examination. Many miscellaneous matters connected with urine analysis are dealt with in a comprehensive chapter, which includes a substantial number of formulae. An appendix to the book deals with the estimation of ascorbic acid and sulphonamides.

ine. Although not large (100 pages), "Practical Methods of Urine Analysis" is packed with useful information. Copies are now available from the Publisher, THE CHEMIST AND DRUGGIST, 28 Essex Street, Strand, London, W.C.2, price 5s. post free.

Commodity Controls

During the past few months we have been writing, by letter and telephone, an ever-increasing number of inquiries from readers for information on commodity controls. We are always pleased to do our best to answer these problems—and, indeed, to ease on any other trade difficulty—we do not help feeling that some of our inquirers, if they took a little trouble themselves, could often relieve us of a good deal of unnecessary labour. We have in mind particularly the reader who has "seen it somewhere" or, "of course, it was in the C. & D. about six weeks ago"; but the "somewhere" too often turns out to be in the reader's imagination, while "six weeks" frequently proves to be six months or even longer of the mark. Often, of course, we answer these queries promptly from memory or from a quick reference to our index, but with the best will (and index) in the world it is sometimes difficult to keep track of all commodity controls. Those of interest to the drug and allied trades, however, are regularly published in the columns of the C. & D., and in this connexion we are reminded of the viewpoints recently expressed by two subscribers. One informed us that he had no difficulty whatever with commodity controls, his practice being to note for future reference the relevant paragraphs as they appeared in THE CHEMIST AND DRUGGIST; while the second very markedly remarked that it was much easier turning up the C. & D. on every occasion just to make sure." While flattered by the confidence placed in us, the present staff shortage compels us to prefer the *modus operandi* of the first subscriber.

Strychnine as a Tonic

Pharmacists are aware that strychnine, by virtue of its bitter taste, reflexly increases the appetite and the flow of gastric juice, but can it claim to have any other

"tonic" effects? Anderson ("British Medical Journal," March 11, p. 360) attempts to answer this question in a somewhat limited series of experiments. To eliminate those effects due to the bitter taste, the drug was administered parenterally. A single dose (gr. 1/20) was injected hypodermically into subjects with normal gastric acidity on a fasting stomach. Active gastric contractions were induced, and an increase in the volume and also in the hydrochloric acid content of the gastric juice was found. In the case of patients with achlorhydria the secretion of hydrochloric acid was not stimulated, nor was the volume of the juice appreciably increased. Injections of gr. 1/30 were given three times a day for three to four weeks to two men with slight hyperchlorhydria and to five with achlorhydria. A test meal was given before and at the end of the period of strychnine medication. In one patient with achlorhydria a small amount of hydrochloric acid appeared, and in one with hyperchlorhydria the maximum percentage of free acid was reduced. In the other patients no significant change in the secretion of acid was observed. In four subjects the emptying time was shortened but was unaltered in the other three. Ten patients convalescing from various illnesses were given hypodermically doses of 2.9 mgm., three times daily, for periods of fourteen to twenty-eight days. In all these patients the weight had been stationary for three weeks before administering the drug. All the patients were on a full ward diet and were encouraged to eat as much as they liked. In five patients there was an increase in weight of one to five pounds, while in three there was a reduction of one pound, and in two there was no alteration. No appreciable changes were observed in the hæmoglobin percentage, nor in the cell content of the blood. The experiments, as far as they went, produced no evidence that parenteral administration of strychnine leads to improvement in the general condition of the patient.

C. & D. QUIZ NO. 24

1. What is euchlorine?
 2. What is microcosmic salt?
 3. What is oititica oil?
 4. What is Wackenroder's solution?
 5. What is salt of tartar?
 6. What is Nylon?
 7. What is Marcussen's ointment?
 8. What is may apple root?
 9. What is the derivation of the word pituitary?
 10. What is philosopher's wool?
- (Answers on p. 351)

ROYAL INSTITUTE OF CHEMISTRY

At the sixty-sixth annual meeting of the Institute of Chemistry, held on March 15, Professor Alexander Findlay (president) announced that the King (Patron of the Institute) had given effect to the change in title to the Royal Institute of Chemistry by the grant of a supplemental charter signed on February 25. Under this, Fellows and Associates were authorised to indicate their membership by the letters F.R.I.C. and A.R.I.C. respectively. The president said chemists could take pride also in what they had done in promoting and protecting the health of the people by safeguarding the purity of food and water supplies, and by the production of essential vitamins and drugs.

Representatives of the Institute had continued to serve on many bodies dealing with questions of public interest, as well as on those directly affecting the profession; with the Joint Council of Professional Scientists consideration had been given to problems that would arise in connexion with the further training and the placing in employment after the war of chemists whose normal careers had been interfered with by the demands of National Service. Other representatives had taken an active part in the work of the Parliamentary and Scientific Committee, which had published a valuable memorandum on "Research and the Universities." In the post-war world, the calls made on the special knowledge and ability of chemists would be greater even than in the past and, if the nation's industrial prosperity and material welfare was to be ensured, a determined and persistent effort would need to be made by Government departments, by industry, and by the universities and technical colleges to pull level with her chief industrial rivals. British chemists had, according to the measure of their numbers, contributed an honourable share to the advance of chemical science; in no country was there higher scientific ability than here but too often there had been failure to make good use of it. The mental outlook and the attitude not only of industrial firms but of the community as a whole towards science must be changed, and the scientific habit and a spirit of trust in science must be cultivated. The president congratulated local sections on their work.

He referred to the Chemistry Education Advisory Board's report on the education and training of entrants to the profession of chemistry through the secondary schools

and the universities. Nothing had impressed him more than the unanimity with which the present unduly rigid and intensive specialisation in the post-School Certificate years had been adversely criticised. The Board was emphatic in its opinion that means must be found for giving to students of chemistry, as of other branches of science, a wider basis of general culture on which to build an intellectual edifice.

The Sir Edward Frankland medal and prize for registered students was awarded to Dudley Rhoden Scarffe (Imperial College of Science and Technology) for his essay "Introduction of the Chemist to the Public."

NEW BOOKS

Thorpe's Dictionary of Applied Chemistry.—J. Thorpe and M. A. Whitley. 8½ in. by 5½ in. Fourth Edition. Vol. VI. London, Green & Co., Ltd., 43 Albert Dock, London, S.W.19. This standard work, with its impressive list of contributors, carries the items dealt with in the general dictionary from GLAU. to INV., and has an index for the six volumes now available. Amongst the many substances of interest to pharmacists are those of cerin, glycosides, hydrogen peroxide, inductors, and insulin. As applied chemistry nowadays involves a fundamental knowledge of physical chemistry, the number of articles on physico-chemical subjects has been increased in this volume and will be added to in later volumes. It is proposed to complete this work with seven further volumes to be published at yearly intervals.

The British Journal Photographic Almanac, 1944.—7¼ in. by 4¼ in. H. Greenwood & Co., Ltd., 24 Wellington Street, London, W.C.2. Pp. 384. 3s. net (paper covers); 5s. net (cloth bound). This Almanac, now in its eighty-fifth year of publication, becomes every year more necessary as a work of reference to the practical photographer. The format of the section has been extensively revised, and some of the more scientific applications of photography, such as oscillograph recording, are explained by experts. A new feature is a glossary of technical terms, and there is the usual pictorial gravure supplement.

The Final Clearance.—That's what we are asked to make of your waste paper and all descriptions in order to send it for salvage and repulping.

PENICILLIN IN THE KITCHEN

GRAPHS have appeared in the popular press describing a "kitchen" method of producing penicillin. In response to inquiries received as to the nature of the procedure involved, an outline of the method, as described in the "Journal of the American Pharmaceutical Association" (official pharmacy edition, IV. 11. 342), is given below. The method is proposed by Julius A. Vogel, of the United States Industrial Hygiene Foundation. It follows the laboratory method of preparing penicillin, but the apparatus used is less complicated. The minimum requirements are: a supply of 150-mm. Pyrex Petri dishes; a culture of *Penicillium notatum*; a coffee-percolator; a supply of 28-24 absorbent gauze; and the ingredients for the culture medium.

Outline

1. The Petri dishes, containing the gauze sterilised at a temperature of 400° F. in an ordinary oven for half an hour. To the medium, one pint of distilled water is placed in the coffee-maker, and 1 lb. of dehydrated yeast, dr. 1½, glycerin, dr. 3. In a teacup are mixed 1 lb. rose, dr. 3, maize starch, dr. 3 and 1 pint of distilled water, fl. oz. 1. The mixture is added to the contents of the coffee-maker, stirred well and boiled for twenty minutes over a low flame. Meantime a 1-pint screw-capped bottle is sterilised by boiling in water for twenty minutes. The boiling solution is immediately poured into the bottle and sufficient boiled distilled water added to fill. The cap is applied and the whole shaken well. When the Petri dishes and culture medium have cooled sufficiently the neck of the bottle is wiped with a gauze sponge saturated with 70 per cent. alcohol. After evaporation, 1 pint of medium is poured into each Petri dish, raising one side of the lid of the dish sufficiently to admit the mouth of the bottle to the purpose. A flamed platinum loop is touched to the stock culture, and transferred to the plate by stroking the loop across the medium several times. The minimum temperature is 72 to 74° F., and the first growth makes itself apparent in twenty-four hours. Soon the entire surface is covered with mycelial growth. In the course of a few hours the colour changes to a light green and subsequently darkens until it becomes almost black. After about five days small yellow globules of pure penicillin appear on the surface of

the mould, and this substance is mainly deposited on the under-surface of the gauze. Formation of penicillin reaches its maximum in twelve days, hence the penicillin gauze requires to be used when it is from four to twelve days old.

TRADE EFFLUENTS

AN address on "Recent Advances in the Treatment of Sewage and Trade Effluents" was given by Dr. B. A. Southgate (acting director of water pollution research, Department of Scientific and Industrial Research) before a meeting of the Royal Institute of Chemistry held recently. He said biological filtration was suitable for treating liquids containing constituents capable of decomposition, under aerobic conditions, by bacteria, fungi, and other organisms. It had been used successfully for treating many types of industrial waste waters, including those from the food industries. Under the best conditions, the volume of settled sewage that could be treated by filtration was not more than 5 gall. per cu. yd. of land per day. A percolating filter of good design could be used to treat settled sewage at a rate of about 60 to 100 gall. per cu. yd. of filtering medium per day. During the past few years there had been notable advances in the use of enclosed, aerated filters; filtration with recirculation of effluent, and alternating double filtration. In the enclosed filter a current of air was passed, usually downwards, through the filtering medium by means of a fan or similar device. Results indicated that a greater volume of settled sewage could be treated per day in enclosed aerated than in the standard open filters.

In 1937 it was shown that sewage could be treated at a greater rate diluted with returned filter effluent before application to the filter. The method of alternating double filtration was developed by the Water Pollution Research Laboratory between 1935 and 1938 for the treatment of waste waters from the milk industry. In this method settled liquid was passed through a filter, a humus tank, a second filter, and finally a second humus tank. At intervals the order of the two filters in series was reversed. Experiments were continued with large filters.

Medical Directory Centenary Issue.—The issue of the Medical Directory for 1944 will be the one-hundredth in the series. A special allocation of paper has been made for production of a slightly larger edition.

TRADE REPORT

Spot quotations for pharmaceutical chemicals, crude drugs and essential oils represent the prices for wholesale quantities of standard quality. C.i.f. quotations do not include marine war risk insurance and other abnormal charges payable in the present emergency.

28 Essex Street, W.C.2, March 22

BUSINESS in all markets has been on a moderate scale during the week. Few important price movements have occurred, but practically all commodities are firmly held. In PHARMACEUTICAL CHEMICALS, makers report a quiet week, with trade mainly confined to the filling of routine orders. No important developments have occurred in the supply position, and no price movements have been notified.

Crude Drugs

Business in this section continues slow, with no features demanding comment. Prices show no appreciable change on the week, and the general tone is firm. BALSAMS are unchanged, with no supplies of either TOLU or COPAIBA. BENZOIN is selling steadily at unchanged rates. First arrivals of BUCHU are due shortly. CAMPHOR for approved purposes continues to sell slowly. CARDAMOMS are neglected. No change in values has occurred in CLOVES or other spices. Supplies of DRAGON'S BLOOD now amount to only a few odd cases. ERGOT is in restricted supply, but prices show no change on the week. Some Russian LIQUORICE ROOT has been released for pharmaceutical purposes; as forecast last week, the price is above the previous quotation. Supplies of MENTHOL at the lower rate now appear to be exhausted. ORANGE PEEL is no longer obtainable on spot. Firm conditions obtain for RHUBARB, supplies of which are not plentiful. SEEDS are dull, with business practically negligible. A fair request has been received for TRAGACANTH.

Essential Oils

The only change of importance in this section concerns the price of distilled LIME. As noted last week (p. 321) it was found necessary to advance the price of this oil because of differences in rates of insurance applying to oils from West Indian islands; the price now quoted is a maximum figure to the user, but considerable variations may occur according to source. Little business is now possible in "free" oils owing to lack of replenishment of the now meagre stocks. ANISE (STAR), when available, continues to command a high price. No changes have occurred in English-distilled CLOVE or NUTMEG.

Pharmaceutical Chemicals

ACETANILIDE.—Price of crystals is unchanged at 2s. 5d. per lb.; powder, 2s. 6d.

ALLOBARBITONE.—Makers' quotation are steady at 60s. per lb.

AMPHETAMINE.—Makers' prices are unchanged at approximately 150s. per lb.

ASPIRIN.—Demand continues to be good. Currently quoted rates per lb., in quantities of 28 lb.—1 cwt., are as follows (contained in brackets): 4s. (1-lb.); 3s. 10½d. (4-lb.); 3s. 7½d. (7-lb.); 3s. 9d. (14-lb.); 3s. 8½d. (28-lb.).

ATROPINE.—Makers' current prices per oz. are as follows: ALKALOID, B.P.—1 oz., 48s.; 4 oz., 34s. 6d.; 25 oz., 34s. SULPHATE, B.P.—1 oz., 28s.; 4 oz., 27s. 6d.; 25 oz., 27s. METHYL BROMIDE and METHYL NITRATE.—1 oz., 10s.

BARIUM SULPHATE (X-RAY).—Quoted at the following rates per lb. in quantities of 25 lb.—1 cwt. (containers in brackets): 1s. 5½d. (1-lb.); 1s. 4d. (4-lb.); 1s. 3d. (7-lb.); 1s. 2½d. (14-lb.); 1s. 2d. (28-lb.).

BENZYL BENZOATE.—Price from 4s. to 4s. 6d. per lb., according to quantity for medical purposes.

BISMUTH CO. PULV., N.F.—Makers' price per lb., in quantities of 28 lb.—1 cwt., are as follows (containers in brackets): 2s. 3½d. (1-lb.); 2s. 2½d. (4-lb.); 2s. 1d. (7-lb.); 2s. (28-lb.).

BORAX.—Makers quote as follows: P., granulated, £39 10s. per ton; crystals, £40 5s.; powder, £41, packed in one-cwt. bags; cargo paid in Great Britain, in one-ton lots and upwards. Commercial quality, £8 per ton.

CODEINE.—Makers' prices per oz. are as follows: ALKALOID.—½ oz., 48s. 3d.; 1 oz., 45s. 9d.; 2 oz., 44s. 3d.; 3 oz., 43s. 6d.; 4 oz., 43s. 3d. HYDROCHLORIDE.—½ oz., 42s.; 1 oz., 39s. 6d.; 2 oz., 38s.; 3 oz., 37s. 3d.; 4 oz., 37s. PHOSPHATE.—½ oz., 37s. 9d.; 1 oz., 35s.; 2 oz., 33s. 9d.; 3 oz., 33s.; 4 oz., 32s. 9d.

CREAM OF TARTAR.—British makers' price continues at 262s. per cwt., less 2½ per cent. discount.

DEXTROSE.—Current prices per lb., in quantities of 28 lb.—1 cwt., are as follows (containers in brackets): 1s. 2½d. (1-lb.); 1s. 1½d. (2-lb.); 1s. 0½d. (4-lb.); 11½d. (7-lb.); 11½d. (14-lb.); 10½d. (28-lb.).

DIAMORPHINE.—Current rates per oz. for small quantities are as follows: ALKALOID.—½ oz., 54s.; 1 oz., 51s. 6d.; 2 oz., 50s.; 3 oz., 49s. 3d.; 4 oz., 49s. HYDROCHLORIDE.—½ oz., 49s.; 1 oz., 46s. 6d.; 2 oz., 45s.; 3 oz., 44s.; 4 oz., 44s.

ETHERS (METHYLATED).—Makers' prices per lb., in Winchester quarts, are as follows: 0.735, 5½d.; 0.730, 5½d.; 0.725, 5½d.

25, is. 7½d.; 0.725 (triply rectified), 2s. 0½d.; 20, is. 8½d.; 0.717, 2s. 2½d.; 0.720, B.P. for anaesthesia, is. 10d.

GALLIC ACID.—Quoted at from 10s. 6d. to 11s. 6d. per lb., according to quantity.

GLUCOSE.—Powdered monohydrate for bulk trade, in lots of 28 lb.—1 cwt., is quoted at 11s. 6d. per lb. as follows (containers in brackets): 1 lb. (28-lb.); 10½d. (14-lb.); 11d. (7-lb.); 4-lb.; is. 0½d. (2-lb.); is. 1½d. (1-lb.).

MAGNESIUM TRISILICATE.—Makers quote for home market, in quantities of 28 lb.—1 cwt., as follows (containers in brackets): 3s. 6½d. per lb. (1-lb.); 3s. 5d. (4-lb.); 3s. 4d. (7-lb.); 3½d. (14-lb.); 3s. 3d. (28-lb.).

MANDRELATES.—Makers' quotations are unchanged. SODIUM AND CALCIUM.—4 oz., 8 oz., 1 lb., 22s. per lb.; 4 lb., 20s. 3d.; 7 lb., 18s. 6d.; 14 lb. (in 7-lb. packages), 16s. 9d.; 1 lb. (in 7-lb. packages), 15s. per lb., net. AMMONIUM (50 per cent. solution)—4 oz., 8 oz., 1 lb., 11s. 9d. per lb.; 4 lb., 10s. 9½d.; 7 lb., 9s. 10d.; 14 lb. (in 7-lb. packages), 8s. 11½d.; 1 lb. (in 7-lb. packages), 7s. 11d. per lb. net. Packages extra and returnable.

MORPHINE.—Current prices per oz., for small quantities are as follows: ALKALOID, ½ oz., 53s.; 1 oz., 50s. 6d.; 2 oz., 49s.; 3 oz., 48s. 3d.; 4 oz., 48s. HYDROCHLORIDE, ½ oz., 43s. 9d.; 1 oz., 41s. 3d.; 2 oz., 41s. 3s. 9d.; 3 oz., 39s.; 4 oz., 38s. 9d.

PHENOLPHTHALEIN.—Makers' prices are ready as follows: Less than 7 lb., 4s. 6d. per lb.; 7 lb., 4s. 5d.; 14 lb., 4s. 4d.; 28 lb., 4s. 3d.; 56 lb., 4s. 2d.

Crude Drugs

AGAR.—There are a few small sales at 30s. per lb., the price fixed by the Control of Agar (No. 1) Order, 1943, for agar and similar specified bstances.

ALOES.—Cape is not available on spot and forward quotations are difficult to obtain. Paraçao, in small supply on spot, 400s. to 425s. per cwt.

AMMONIACUM.—Ordinary drops are available at 2s. per lb.

ANTIMONY.—No change has occurred in the price of English minimum 99 per cent. at £120 per ton, delivered; supplies are reserved for essential requirements; 70 per cent. crude, for the home trade, £100 per ton, delivered.

ARECA NUTS.—Spot supplies may be purchased from dealers at the unchanged price of 15s. per cwt., ex store.

BALSAMS.—Peru is steady on spot at 8s. 3d. per lb., and Canada at 10s. 6d. Tolu and Copaiba are unobtainable.

BELLADONNA.—No change has occurred in the spot price of Indian leaf testing 0.4 per cent. at 5s. 3d. per lb.; Indian root, testing 0.49 per cent., may be had on spot at 500s. per cwt., and 36 per cent. at 330s.

BENZON.—Sumatra block is selling slowly for pharmaceutical purposes at about £25 per cwt.; free "almonds," from £35.

BUCHU LEAVES.—First arrivals are due shortly.

CAMPHOR.—Dealers report small sales to approved buyers of Chinese crude at 10s. per lb., and B.P. at 11s. 6d.

CARDAMOMS.—Quiet; values steady. Aleppy greens may be obtained on spot at 5s. 6d. per lb., and Aleppy seed at 6s. 6d.; split seed would be worth 5s. 6d.

CHAULMOOGRA.—*Hydnocarpus*, spot, is. 6d. per lb., in tins in cases.

CHILLIES.—Mombasa is the only variety offered at present; spot price is steady at 115s. per cwt., sellers.

CLOVES.—There are spot sellers of Zanzibar at 1s. 2d. per lb.; second-quality, to arrive, 10d. per lb., c.i.f., sellers.

COCHINEAL.—Spot supplies of blacks appear to be exhausted.

COCOA BUTTER.—Official maximum price, except for sales covered by licence, is 1s. 5½d. per lb., ex factory or warehouse.

COCONUT (DESICCATED).—A Ministry of Food Order fixes the maximum price at 49s. per cwt.

COLOCYNTH.—Dealers offer fine white pulp on spot at 3s. per lb.

DIGITALIS LEAVES.—Portuguese leaves are available at 135s. to 140s. per cwt., according to holder, and English-grown at 2s. 6d. per lb.

DRAGON'S BLOOD.—There may be an odd case or two of Zanzibar drop on spot for which £21 per cwt. would be wanted; no other varieties are offered.

ERGOT.—In restricted supply on spot at from 6s. 3d. to 6s. 6d. per lb.

GUM ACACIA.—Demand fair; prices unchanged. Kordofan cleaned sorts, 80s. per cwt.; bleached, shipment, 140s., c.i.f.; Talha, cleaned, 50s. per cwt., landed.

HENBANE.—Indian leaf, spot, 250s. to 275s. per cwt., according to holder, with some low-testing material at 1s. 3d. per lb. Russian leaf is available at 3s. 6d. per lb.

IPECACUANHA.—No change has occurred in the supply position. Current prices of Ext. IPECAC. LIQ. are as follows: Winchester, B.P., 1932, under three, 32s. 6d. per lb.; three and under six, 32s.; six and under twelve, 31s. 6d.; twelve and over, 31s.; B.P., 1914, under three, 30s. 6d.; three and under six, 30s.; six and under twelve, 29s. 6d.; twelve and over, 29s. per lb.; all prices quoted are on a net basis.

JALAP.—In restricted supply. Small quantities of Brazilian root (13 per cent. resin) can be obtained at from 175s. to 200s. per cwt., according to seller.

KAMALA.—Material with ash under 6 per cent. would cost 1s. 9d. per lb.

LIQUORICE ROOT.—Russian root is now available for pharmaceutical purposes only at 85s. per cwt. Single-peeled Syrian, spot, 110s. per cwt., subject to D.M.S. approval.

MENTHOL.—Supplies at 95s. per lb. now seem to have been cleared, but some is reported to be available at 125s.

MERCURY.—Official spot quotations range from £68 10s. to £69 15s. per flask, according to conditions and quantity, with higher rates for smaller lots and redistilled grades.

MYRRH.—Spot price of Aden sorts is steady and unchanged at £20 per cwt.

NUTMEGS.—West Indian, spot, wormy and broken, 1s. 4½d. per lb.; sound unassorted, 1s. 7½d.

NUX VOMICA.—Cochin would be worth 45s. per cwt. on spot; shipment, 32s. 6d., c.i.f., seller's licence.

ORANGE PEEL.—Supplies are unobtainable on spot.

PEPPERS.—Maximum prices of whole, not picked over or cleaned, on sale to processors, are: 1s. 4d. per lb. for white, and 1s. per lb. for black, both duty paid.

PIMENTO.—Sellers on spot at 1s. 5d. per lb.; shipment prices are not quoted.

QUILLAIA BARK.—Crushed or cut, spot, 90s. per cwt.; natural, 75s.; shipment, 55s., c.i.f.

RHUBARB.—Firm, but not much available. Rough-round, spot, 9s. per lb.

SEEDS.—Market dull with little business moving. Current rates are: **CORIANDEK.**—Indian, 80s. per cwt. **CUMIN.**—Maltese, spot, 110s.; Indian, 105s. **DILL.**—160s., ex wharf. **FENNEL.**—Offered at 85s. **FENUGREEK.**—May be had at 80s. **MUSTARD.**—Controlled prices are unchanged.

SENNA.—Alexandrian medium pods are at 4s. per lb.; Tinnevely, manufacturing grade, 6d. to 6½d.; hand-picked, 8½d. to 1s.; broken Alexandrian leaves, 1s. 3d. to 1s. 4d.; siftings, 1s. 2d.; Tinnevely, No. 1, 9d. to 10½d.; No. 2, 7d. to 7½d.; No. 3, 5½d. to 6d.

SQUILL.—Portuguese bulb is priced at 75s. per cwt. on spot, and Indian at 70s.

TRAGACANTH.—The principal medium grades are quoted as follows: No. 1, white, £130 per cwt.; No. 2, white, £115; No. 3, white, £100; No. 4, white, £85; pale leaf, £60; amber leaf, £50; dark amber, £40; brown leaf, £30; red-and-brown leaf, £25; red leaf, from £20; hoggy, £12 to £15.

TURMERIC.—Madras finger, sound-quality, spot, 52s. 6d. per cwt., London; 50s., Liverpool; 47s. 6d., Glasgow.

WAXES.—**BEES'.**—Supplies may be obtained only through members of the Association of Merchant Distributors of Beeswax; official prices are as follows: Crude, 260s. to 290s. per cwt.; refined, 315s. to 355s.; bleached, 340s. to 370s.; Calcutta crude, 250s. to 270s.; Calcutta bleached, 325s. to 335s. **CARNAUBA.**—Fatty grey, 425s. per cwt., ex store, in minimum one-bag lots; shipment, 385s., c.i.f.; Primeira, 535s. per cwt., ex store, with stocks scarce; medium yellow, 527s. 6d. per cwt.; chalky grey, 405s. per cwt.; shipment, 375s., c.i.f. (c.i.f. prices include ½ per cent. W.R.I.). **CANDELLILA.**—As noted recently, prices have been reduced as follows: Under 1 ton, 235s. per cwt.; 1-5 tons, 232s. 6d.; 5 tons and over, 230s., ex store; forward, 225s. per cwt., c.i.f.

Essential and Expressed Oils

ANISE (STAR).—About 120s. to 130s. per cwt. would be required for any small available supplies.

CAJUPUT.—In restricted supply; spot, available, about 15s. per lb.

CASTOR.—Controlled price for bulk lots £92 per ton for firsts and £90 for seconds, both naked ex works.

CINNAMON.—Any available spot supplies leaf oil would fetch approximately 15s. per lb.

CLOVE.—No change in English distilled prices for genuine B.P. oil at 11s. 6d. to 12s. per lb., according to quantity.

COCONUT.—Bulk supplies of refined deodorised are officially quoted at £49 per ton, and refined hardened deodorised at £53, both naked ex works.

COTTONSEED.—Controlled prices for bulk supplies are as follows: Crude, £52 2s. 6d. washed, £55 5s.; refined edible, £57; refined deodorised, £58 per ton, naked ex works.

GERANIUM.—Spot price of genuine North African oil is from 85s. to 90s. per lb., according to quantity.

GROUNDNUT.—Controlled prices for bulk supplies are as follows: Refined deodorised, £42 per ton; refined hardened deodorised, to 4½d. £62; refined hardened deodorised, to 50° to 55° £63; all naked ex works.

NUTMEG.—English distillers quote 40s. per lb., with lower rates for quantities.

RAPESEED.—Bulk supplies are officially quoted at £70 per ton, naked ex works.

Controlled Essential Oils.—The following are the current schedule of prices for controlled essential oils. Prices are per lb., for oils delivered to consumer in original packages.

Lemon, cold-pressed	18s. 10½d.
Lemon, distilled	14s. 4d.
Peppermint	36s. 4d.
Grapefruit	18s. 2d. (incl. duty)
Sassafras	11s. 3½d. (plus 1s. duty)
Caraway	20s. 4½d. (plus 1s. duty)
Wormseed	15s. (plus purchase tax where payable)
Cedarwood	3s. 1d. (plus 3d. duty)
Nutmeg	22s. 3d. (plus 2s. duty)
Fennel	11s. 3½d. (plus 1s. duty)
Coriander, Russian	127s. (plus 11s. 6d. duty)
Geranium, Bourbon	25s.
„ (Ministry oil)	24s. 6d.
Orange oil, Jamaica	23s. 6d.
Vetivert	37s. 7d. (plus 3s. 5d. duty)

As noted last week (p. 321), the maximum price to the user of West Indian distilled LIME OIL has been advanced to 50s. per lb., owing to differences in insurance rates. The price is maximum one and may vary.

MISCELLANEOUS INQUIRIES

Triethanolamine Stearate.—*J. N.*—100 lbs by weight of stearic acid requires 48·9 lbs by weight of triethanolamine to form triethanolamine stearate.

Extra Towels.—*H. L.*—You should write your district inspector of factories, asking Form M.L. 2050. He will decide whether you are entitled to an extra supply.

Saponaceous Disinfectant.—*H. D. C.*—The following formula would be suitable:—

Chloroxylenol	2·5
Eucalyptus oil	1·5
Essential oil of camphor..	1·5
Terpineol	2·5
Industrial methylated spirit	15·0
Ammonium oleate or ricin- oleate	6·0
Water	to 100·0

Malted Milk.—*M. F.*—Malted milk may be made by combining whole milk with the acid separated from a mash of ground rye malt and wheat flour, with or without the addition of sodium chloride and sodium carbonate, in such a manner as to secure the full enzymic action of the malt extract, afterwards removing the water. Such a product can hardly be made on a small scale, for which purpose the simplest plan would be to mix one part of dried full-cream milk with three parts of powdered dry extract of malt. This would yield a product containing about 7 to 7·5 per cent. of butter-fat and not more than 3·5 per cent. of moisture, the usual standards adopted.

Coccidiosis in Calves.—*E. L.*—In the treatment of coccidiosis in calves, the usual method is to give thymol or salol with milk, e.g.:—

Cretæ	3iv.
Thymol (or salol)	3j.

Mixed in gruel and given once daily. Promising results are being obtained at the present time by the administration of sulphaguanidine in doses of 0·05 gm. per kilo of body-weight. As the treatment is new it is advisable to apply it to one or two cases at first to test its reactions.

Prophylaxis of Goitre.—*J. G.*—"Simple" goitre, the type associated with iodine deficiency, is due to inability of the thyroid gland to obtain sufficient iodine. Where goitre is endemic, the water-supply is usually found to contain less iodine than in regions where the condition is rare. To change the water-supply on a community scale is impracticable at present, though extensive alterations of the water-supply

have been made in parts of Somerset and Derbyshire, and as a result goitre has been less prevalent in those counties. Failure of supplies of fish, the only food rich in iodine, is another likely cause, and there is reason to believe that the present lack of fish in this country is causing an increase in the disease. The goitre committee of the Medical Research Council urges, as a prophylactic measure, the addition of a trace of potassium iodide (1 in 100,000) to all common salt, which gives 10 gm. of salt as the average daily salt intake, an average of 0·076 mgm. iodine per head daily. Such a minute amount is not likely to have any ill-effects, and the efficacy of iodised salt has already been proved in Switzerland, Poland and the United States of America.

Carboy Colours.—*F. L. O.*—Organic colours, including aniline dyes, fade rapidly in carboys, and need frequent renewal. Inorganic chemicals are more permanent.

Green

Copper sulphate	1 lb.
Salt	3 lb.
Hydrochloric acid	1 pint
Distilled water	2 gall.

Dissolve the solids in the water, add the acid, set aside for a week and decant the clear solution. Do not filter through paper or there will be more deposit.

Reddish-pink

Cobalt chloride	1 oz.
Ammonium carbonate	1½ oz.
Distilled water	2 gall.

Dissolve the cobalt chloride in 1½ gall. water, and the ammonium carbonate in the remainder, then add the latter solution to the former until the precipitate at first formed is redissolved. Set aside as before and decant the clear solution.

An excellent garnet colour may be made with potassium dichromate, 1 lb.; sulphuric acid, 16 oz.; distilled water, 2 gall. Dissolve the solid in the water and add the acid slowly, stirring all the time. Set aside as before and decant from any deposit.

"C. & D." Quiz No. 24.—The answers to the questions on p. 345 are: 1. A mixture of chlorine and chlorine peroxide. 2. Sodium ammonium hydrogen phosphate. 3. A drying oil from the seeds of the oiticica tree (Brazil). 4. A mixture of polythioric acids obtained by passing hydrogen sulphide into a solution of sulphur dioxide. 5. Potassium carbonate. 6. A polyamide with protein-like structure. An artificial fibre used for brushes. 7. Ung. potass. polysulphid. 8. The rhizome and roots of *Podophyllum peltatum*. 9. Greek; *pituita*, slime or mucus. 10. Zinc oxide, made by burning zinc.

CORRESPONDENCE

Correspondents may adopt an assumed name, but must in all cases furnish their real name and address to the Editor

Welfare Vitamin Foods

SIR,—In reference to your comment upon the lack of interest taken by mothers in the distribution by the Ministry of Food of cod-liver oil, etc. (*C. & D.*, March 18, p. 311), my own experience is that the mothers do take an interest in the matter, but prefer to get these products from the chemist rather than the clinic, and for two main reasons: first, the accessibility of pharmacies; and, secondly, because they have more confidence in supplies from a pharmacist than from a clinic. At the same time they frequently seek his advice, and they set their own value upon it. If distribution should eventually be transferred to the chemist, will he be asked to forfeit a substantial share of his profit? If so, he may well leave the distribution where it is.

Yours faithfully,

Alton, Hants. FRANK E. S. CLARKE.

Polypharmacy

SIR,—We noted with interest the "blunderbuss" prescription in *THE CHEMIST AND DRUGGIST* (March 18, p. 306). Another interesting case of polypharmacy is afforded in the following example which was presented in the dispensary of this hospital a few years ago:—

R	Pot. iod.	gr. 5
	Sod. sal.	gr. 10
	Tr. digitalis	m. 10
	Tr. nucis vom. . . .	m. 5
	Tr. card. co.	m. 15
	Mag. carb.	gr. 10
	Bismuth. carb. . . .	gr. 10
	Tr. camph. co. . . .	m. 20
	Pot. brom.	gr. 10
	Tr. rhei co.	m. 10
	Tr. zingib.	m. 5
	Sod. bicarb.	gr. 15
	Sp. ammon. arom. . .	m. 15
	Ol. menth. pip. . . .	m. 1
	Inf. gent. co.	ad fl. oz. 1

The tale of woe poured into the houseman's ear to produce that effort boggles the imagination! Also the sigh with which the pharmacist greeted it in the middle of a busy outpatients' afternoon must have been heard to appreciate fully the profundity thereof!—Yours faithfully,

EDWIN W. BARSTOW,

T. D. WHITTET,

Co-chief Pharmacists.

Charing Cross Hospital,
London, W.C.2

Prescription Problems

SIR,—In recent issues of the *C. & D.* there have appeared specimens of what a doctor can, really do when he sets himself out to imitate the hieroglyphics practised at the dawn of history. As a chemist dealing with quite a number of "specimens," I am strongly on this subject, and when I saw your latest example (*C. & D.*, February 18, p. 201) I thought it was about time that sort of scrawl by doctors should be condemned by our profession as a whole. A pharmacy is in no way a puzzle corner, and chemists should not be encouraged to "pride themselves on their ability to decipher prescriptions"—there is too much at stake in the event of the scrawl being wrongly deciphered, not to speak of the chance of the patient being given the wrong drug. I well remember in my apprentice days seeing scripts being passed around the senior members of the staff with the question, "What do you make of that?" I think that the proper method of dealing with these specimens is to hand them back to the patient with the explanation that it would be dangerous to dispense, and request him to take it back to the doctor to be properly written. The tacit admission among some pharmacists that they are "door-mats" for doctors should be entirely discouraged—after all, the days of the striped pole should not be forgotten by either doctors or chemists.

Yours faithfully,

DISPENSER.

Appreciations

I am renewing my annual subscription to your invaluable publication. I enjoy it for its sound common sense, and wish to thank you for maintaining your high standard in difficult circumstances.—S. S. (Manchester, 8).

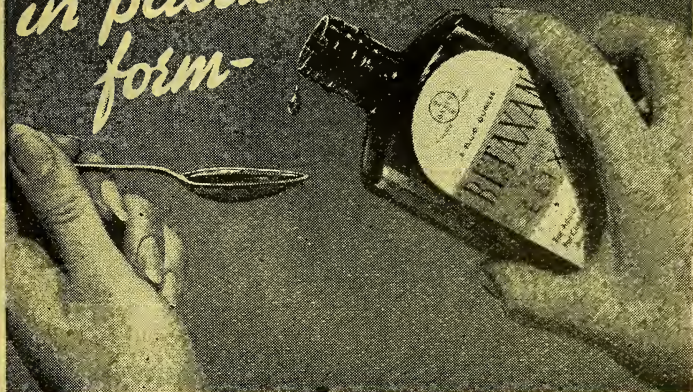
Very many thanks for your very prompt and full reply to my recent query. Once again the value of the *C. & D.* is fully emphasised.—A. Downing (Plymouth).

We have pleasure in informing you that our copies of *THE CHEMIST AND DRUGGIST* have been arriving regularly, and to inform you that the journal is as up to date, informative and helpful as the pre-war edition. We offer you our congratulations.—M. de I. (Lagos, West Africa).



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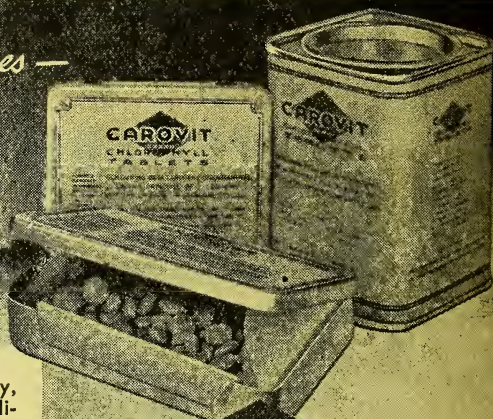
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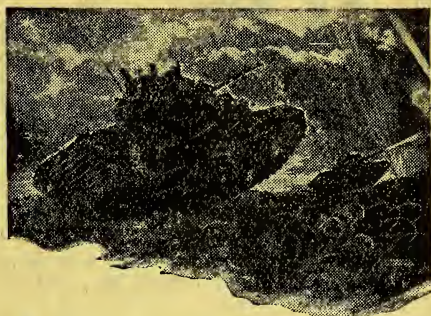
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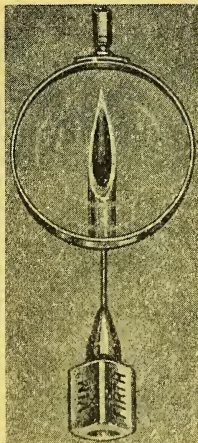
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Virus for Mice only	single tube, 1/6	9/-
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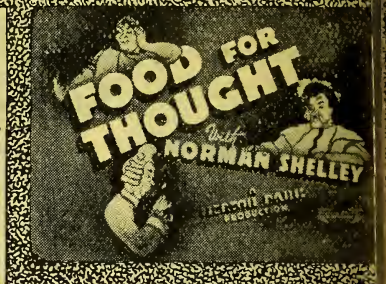
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... displays of 'BiSoDoL' to link up with your LOCAL film-showings? Ask our representatives for display material (if you have insufficient on hand) and for details when and where the film is being shown in your district.

Scenes from the film "Food for Thought" which 'demonstrates' eating through the ages—and particularly the need for 'BiSoDoL' in modern times.



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The CHEMIST AND DRUGGIST

SUPPLEMENT

This Supplement is inserted in every copy of the Chemist & Druggist

MARCH 25
1944

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We urgently need several secondhand rotary single or multiple punch tablet machines and a granulating machine. (Manesty preferred); also mechanical mortar. Highest cash prices paid for good machines collected from any part of country. Full particulars to: J. W. Simpson (Chemist), Ltd., 43 Museum Street, London, W.C.1. CHAncery 6101.

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Guaranteed Free from Petroleum Products. No Oil required. Stable White Emulsions with Water only. Prepared from high-grade non-injurious material. Prices 9/6 per lb. Carriage paid. Minimum 7 lb. Special quantity Rates for Distributors.

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SITUATIONS OPEN

7/6 for 40 words or less, 2d. for every additional word.

Employment of Women (Control of Engagements Order 1942)

With certain exceptions, women over 18 and under 41 years of age seeking Employment and Employers seeking to engage such women are now required to do so only through the local office of the Ministry of Labour and National Service or an approved employment agency.

RETAIL (HOME)

CHEMISTS. Applications are invited from Qualified men over 51 years of age who have Retail experience. Applicants should be completely mobile, active, and in good health. Reply stating age, qualifications and all relevant particulars of experience, to 561/144, C. & D. London Office.

CHEMIST-OPTICIAN or Chemist, either sex, exempt, required as Branch Manager. No Sunday of half-day duty. Apply stating age, salary required, and experience to the Secretary, Co-operative Society, Ltd., Free School Lane, Lincoln.

CROYDON District. Qualified Assistant required in medium-class business. Exempt. Hours: 9 to 6.30. Please state age, reference, and salary required. Duties to commence as soon as possible. 562/152, C. & D. London Office.

HEPPELLS (1932) Ltd., require experienced Unqualified Male Assistant. Also experienced Assistant, Male or Female, for evening duties. 6-9 p.m. and one half-day per week. Apply, Superintendent, 70 Vauxhall Bridge Road, S.W.1.

MANAGER to take charge of Pharmacy, West London. Permanency for suitable applicant. 560/998, C. & D. London Office.

MANCHESTER. Qualified M.P.S. required at once, permanency or locum. Either sex would suit, elderly. 561/148, C. & D. London Office.

N.H.I. Dispensing. Wanted qualified or unqualified male or female to assist in N.H.I. Dispensing. Good salary. Apply Ralph Cuthbert Ltd., Huddersfield.

ORRIDGE & Co. Employment Agency, Columbia House, Aldwych, W.C.2, invite inquiries from pharmacists and unqualified persons requiring situations, except women between the ages of 18 and 41. Progressive vacancies available. Excellent opportunities exist for unqualified assistants.

PHARMACIST with first-class West End experience required as Manager. Good wages offered. CDB/273, C. & D. London Office.

QUALIFIED Pharmacist (male or female) required for Retail Dispensing Department. Must be exempt Military Service. Apply with full particulars to Chas. F. Thackray Ltd., Park Street, Leeds.

QUALIFIED Manager, exempt military duties, urgently required for duration. Central London. 7 guineas per week. No Sundays. 562/154, C. & D. London Office.

STOCKPORT. Wanted urgently qualified Manager, owing to death of proprietor. Permanency. Widow desires to continue business with the aid of Manager. Working-class district; brisk N.H.I. and Counter. Apply with full particulars to Bann's Pharmacy, Hilgate, Stockport.

TAYLORS BRITISH CHEMISTS have vacancies for Qualified Managers and Assistants, male or female, in the Midlands, North of England and Scotland. Apply Retail Staff Department, Burley Hill, Leeds, 4.

WANTED. Chemist, exempt from military service, for Herbal Prescribing practice, for duration. Ability to prescribe essential. 561/142, C. & D. London Office.

WELL-KNOWN distributing organisation has vacancies in several districts of London for women assistants with up-to-date knowledge of chemists' shops. Salary £160 per annum and upwards according to experience. 561/149, C. & D. London Office.

LOCUMS WANTED

PHARMACIST (male or female) required as locum for August, or longer period if possible. salary required, and full particulars, to The H. pools Co-operative Society, Ltd., Stockton & West Hartlepool. Endorse envelope "Locum."

QUALIFIED Locum required from 5th to 6th June, 1944, and any other three weeks per September, 1944. Full particulars to The Scunthorpe Co-operative Society Ltd., 180 Street, Scunthorpe.

QUALIFIED Locum required immediately for 1 month, £8 per week. Fares paid. No Sunday half-day duty. Hours, 8.30 to 6 p.m. Ade staff. Particulars to A. F. Thomason, High Street, Campden, Glos.

WHOLESALE

ALERT Local Representatives, with live connexions among Chemists and Hairdressers, required immediately by leading manufacturer of important raw materials with rapidly-growing business. Liberal terms (salary expenses and commission) for right men. Several territories outside London at once allocated. Box W. 50449, John Haddon & Co. Ltd., 11-12 Salisbury Square, London, E.C.4.

CAPSULES. Experienced person in the manufacture of Gelatine Capsules required for a remunerative position. 561/145, C. & D. London Office.

EXPERIENCED Forewoman wanted for Packing Goods Department of Manufacturing Chemist. Apply, C. R. Harker, Staggs & Morgan, Ltd., Elm Street, Mile End, London, E.1.

EXPORT Packer required, exempt military service, by North London firm of Manufacturing Chemists. Experience in the receipt and despatch of goods preferred but not essential. The position offers scope and good post-war prospects for an energetic man with initiative and ability. Apply in writing giving full details of experience and salary required. 561/147, C. & D. London Office.

MANUFACTURERS of high-class ethical products require Representatives for the following areas: (1) Midlands; (2) Eastern Counties; (3) Wales. CDB/272, C. & D. London Office.

MESSRS. BELL & Sons, Ltd., Veterinary Chemists, Silverdale Works, Liverpool, will be pleased to consider applications from experienced Salesmen of high integrity for vacancies in the South, South-east and North Midlands for the sale of George I. Pet Remedies. Established connexions in all districts. Apply Sales Director as above.

PROGRESSIVE Organisation requires Qualified Chemist for Pharmacy Department. Either exempt national service. Good salary and prospects. 444/353, C. & D. London Office.

REPRESENTATIVE required for Midland territory; preferably with own car; resident in Birmingham or Coventry area; exempt military service to call on chemists, stores, etc., for well-established manufacturers of proprietary and animal medicines. 561/125, C. & D. London Office.

REPRESENTATIVES required, capable of earning £1,000 per annum, by well-known Home Pharmacaceutical products in free supply, nationally advertised. Applicants must have established connexions in either (1) Lancashire and Cheshire; (2) South-west England and South Wales. Good salary, expenses and commission. Write in confidence, full particulars experience, present employment. 562/158, C. & D. London Office.

RESPONSIBLE position in established progressive Manufacturing Company is offered to a lady or gentleman with sales experience in Chemist and/or Drapery fields. Interesting commission work in connexion with company's propaganda and distribution. The position will provide a wide scope and excellent post-war prospects. 561/143, C. & D. London Office.

REPRESENTATIVES wanted to carry additional lines of cosmetics, calling on retail chemists and on commission basis; territory vacant: Lancashire, Counties, Midlands, South Coast and S.W. Write in confidence, 561/124, C. & D. London Office.

RETIRED for old-established small factory in South-East London—Overseer experienced in manufacture of Galenicals, Toilets, Ointments, etc. Write particulars and salary report to 561/150, C. & D. London Office.

RETAILER required; previous experience not essential, but must have good knowledge of trade; good salary; permanency. Also one or two part-time Assistants of either sex. Ernest & Co., 329 High Holborn, W.C.1. Also vacancies for the Midlands.

RETAILER. Experienced woman required (not eligible for National Service) for Sales and to deputise to buyer. Apply, personally, Selfridges' office.

RETAILERS on commission required for two pick-up lines, small and easily carried, Wales, Lancashire, and North England. Thomas, 87 Old Park Street, N. 21.

RETIRED Lady Pharmacist for manufacturing Laboratory, S.W. England, M.P.S. qualification. Required to undertake interesting research for large manufacturers in toilet and hair-care field. Permanency, with excellent post-war terms. 561/118, C. & D. London Office.

SITUATIONS WANTED

for 18 words or less, 1d. for every additional word.

RETAIL (HOME)

RETIRED (47) after many years wholesale, wishes to re-enter retail; view branch management or succession; preferably country; state 561/130, C. & D. London Office.

WHOLESALE

RETIRED (50), keen, smart, active, 35 years' unique experience Retail, Manufacturing, etc., Finishing, etc., of Pharmaceuticals, Toilets, etc., control mixed staff, wishes contact enquiring, future date, reliable man of highest character and tact for position with post-war possibilities. "H. S.", 561/141, C. & D. London Office.

RETIRED Pharmacist, exempt, now engaged on medical propaganda, desires change. Very good organiser, tactful and executive ability, with a comprehensive knowledge of the industry. Appointment is sought with manufacturing chemists (London or Home Counties) dealing ethical products, sales management, etc. Commensurate salary expected. 561/133, C. & D. London Office.

RETIRED Pharmacist (retired), 25 years' experience management and control of staff, manufacturing, packing, etc., desires employment in London area for duration or longer. Chief object of a helpful and interesting character. 561/155, C. & D. London Office.

RETIRED Manager. Excellent record management, training representatives, and personal sales results post offering opportunity for real advancement. 561/131, C. & D. London Office.

BUSINESSES WANTED

for 40 words or less, 2d. for every additional word.

RETIRED CLASS Dispensing and Family Business wanted (Yorkshire preferred but not essential). Details of dispensing and turnover, etc., pre-war and post-war period, agencies, etc. CDB/275, C. & D. London Office.

RETIRED of England. Good-class Dispensing Retail Business wanted. Turnover £3,000 upwards. Details in confidence to CDB/276, C. & D. London Office.

MISCELLANEOUS SALES

12/6 for 60 words or less, 1/- each additional 10 words or less.

AMPOULES for Disposal. 100,000 3 c.c. Flat Bottom, Constricted Neck Ampoules, white glass, soda (dimensions as British Standard No. 795, Table 3). Samples and price on request. 562/161, C. & D. London Office.

LITHIUM Citrate, 56 lb.; Monoethanolamine, 4 cwt.; Ethylene Glycol, 30 lb.; Alex. Senna Pods, H.P., 56 lb.; Bornyl Acetate, 4 cwt.; Benzaldehyde, pure, 100 lb.; Benzoic Acid, B.P., 98 lb.; Terpene Hydrate, 1,000 grams.; Paraf. Durum., cwt.; White Block Stearic Acid, 130/132, 5 cwt.; Aube-pyne, 14 lb.; Phosphoric Acid, B.P., 4 cwt.; Bismuth Carb., 2 cwt.; Pot. Iod. B.P., 1 cwt. Write Henshaw, M.P.S., 97 Clearmount Road, Weymouth. Tel. 448.

ODD lots Basic Dyes (Straw Hat Dye). Send for list. W. B. Cartwright, Ltd., Rawdon, Leeds.

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A RELIABLE firm of Manufacturers' Agents with a Sales Force covering the whole of England (but would consider smaller territory) are open for a really sound Agency, with a preference for Toilet Goods, Fancy Goods, or Cosmetics. Full terms, with samples, to Sales Manager, 13 East Park Parade, Northampton.

A GENT guarantees maximum Sales and Goodwill for quality lines with post-war potentialities. Following area has been regularly worked for eighteen years by leading salesman: London, Sussex, Surrey, Hampshire, Kent. Small goods delivered. 562/157, C. & D. London Office.

CHEMIST and Hairdressers' Sundriesman with established connexion among Wholesale Chemists, Hairdressers' General Warehousemen in London, Birmingham, Manchester and Glasgow, is prepared to accept one additional line, preferably one with post-war possibilities. Buying or agency terms. Reputable firms only desired. References exchanged. 562/156, C. & D. London Office.

NORTHERN IRELAND. Well-known and experienced Representative seeks additional sound Agencies, present and post-war. Excellent and long-standing connexion wholesale and retail trades. Commission basis, only reputable firms considered. 561/140, C. & D. London Office.

PORTUGAL Agent—well established connexion with chemists—seeks additional agencies with post-war prospects. Able to undertake manufacture and distribution. 560/996, C. & D. London Office.

PROGRESSIVE company with established and extensive connexions among leading stores and Co-operative Societies throughout the country are able to handle a further agency for Manufacturers of Quality Products. Purchasing agency considered. 562/153, C. & D. London Office.

SMALL firm of Manufacturing Chemists with large connexions amongst Doctors, Chemists, Wholesalers, Hospitals, Dental Surgeons, and Stores in Lancashire, Cheshire, Derbyshire, Staffordshire, Leicestershire, Nottinghamshire, desires Agency for Medical, Surgical and Dressings Supplies on commission basis. 562/151, C. & D. London Office.

WANTED Area-distributing Agents by Manufacturing Chemists for the following territories: (1) London and Home Counties; (2) Midlands and North Wales; (3) North of England, excluding Scotland; (4) South of England, including South Wales; (5) Northern Ireland. To handle three nationally advertised proprietary lines. Applicants must have extensive connexions with Chemists (Wholesale and Retail), Stores, etc., and have staff of Travellers making regular calls. Write, fully stating present Agencies, territory covered, etc. 562/159, C. & D. London Office.

APPOINTMENTS

CONNAUGHT HOSPITAL, E.17

DISPENSER (UNQUALIFIED) REQUIRED. Whole-time duties under the Pharmacist. Applications, stating age, experience, salary required, and enclosing copies of not more than three testimonials to the undersigned. (Male candidates should state their position with regard to military service, women should not be liable for National service).

R. HALTON HARRISON,
General Secretary.

CITY OF MANCHESTER

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Applications are invited for the post of Temporary Chief Pharmacist (non-resident) at Withington Hospital and Institution, Nell Lane, West Didsbury, Manchester, 20. The post is on the permanent assignment of staff but it will be of temporary nature during the war, subject to review thereafter.

Candidates must possess the qualification of "Pharmaceutical Chemist" as recognised by the Pharmaceutical Society of Great Britain and have had wide experience in the work of a Hospital Dispensary.

Basic annual salary scale commences at £505 rising to a maximum of £535 plus a cost of living wages addition amounting to £40 10s. in respect of a Male officer and £33 16s. in respect of a Female officer on the commencing salary. This addition amounts to £33 16s. for either a male or female officer on the maximum salary. The post is subject to the Manchester Corporation conditions of service. Full information and forms of application may be had from the Medical Officer of Health, Hospitals Administration Section, P.O. Box 399, Town Hall, Manchester, 2, by whom all applications must be received not later than April 12, 1944.

Canvassing in any form is prohibited.

R. H. ADCOCK, *Town Clerk*
Town Hall, Manchester 2.
March 21st, 1944.

EAST SUFFOLK AND IPSWICH HOSPITAL IPSWICH

Assistant Pharmacist (qualified) required. Hospital experience preferred. Commencing salary, £275 per annum. Apply, Arthur Griffiths, Secretary, The Hospital, Ipswich.

BUSINESS OPPORTUNITIES

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FOR Sale, well-known Patent Preparation for the Cure of Chilblains, Eczema, Bed Sores, etc. For particulars write CDB/256, C. & D. London Office.

MANUFACTURING Chemist in London has labour and facilities for Packing, Filling and Wrapping. Some assistance available in the way of bottles, paper containers and materials. 557/908, C. & D. London Office.

MANUFACTURER (South Africa) of Hot and Toilet Lines wishes to contact Manufacturers; view to manufacturing formulas or packing and marketing bulk Existing factory premises, distribution facilities available. Apply in first instance to H. Son, Hill & Co., 236 Baker Street, London,

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ASPIRIN Powder, Crystals, Grans., and tablets, required in large or small quantities. Highest market prices paid. 442/304, C. & D. London Office.

AUTOCALVE (steam-jacketed, and not less than 24 in. diameter) wanted by important Manufacturing Chemists for urgent medical supplies for H.M. Forces. Hire of suitable apparatus favourable terms would be considered. Write Chemist, c/o R.C.N. Ltd., 2 Arundel Street, London Office.

CALCIUM and Sodium Hypophosphites wanted. State quantity and price. CDB/271, C. & D. London Office.

CALCIUM Gluconate required for immediate forward delivery. Best prices paid. Immediate Cash, 558/942, C. & D. London Office.

CHEMIST AND DRUGGIST DIARY FOR 1944

5/- will be paid for good copies of the "C. & D. Diary" for 1944. Despatch should be advised by postcard and copies sent by post to The Publisher, The Chemist & Druggist, 17 Argyle Street, Bath, Somerset.

EUCALYPTUS Leaves, cwt.; Peppermint Leaves, cwt.; Lavender Flowers, 28 lb.; Peppermint Oil, Aniseed Oil, and other oils, 5 lb. and up; Glycerine; Borax; Boric Acid. Any surplus stocks of Chemicals, Drugs, Oils, etc. Full particulars of prices and quantities to CDB/274, C. & D. London Office.

ROSE, Otto, Jasmin, and other flower essences wanted. No quantity too small. Best prices in the trade offered. Only finest quality adulterated entertained. Send particulars including origin to Picot, Ltd., 14 High Park Road, Gardens, Richmond, Surrey.

ROTARY Tablet Machine, suitable for compounding Saccharin tablets, urgently required. Ashford, Ltd., Manufacturing Chemists, Sheffield.

TABLETING Machine wanted for hiring immediately; pressure about 5 tons. Details, by letter to A.M.R., c/o Abbotts, Eastcheap, London, E.C.4.

TERPINOLENE wanted, prompt or later delivery. Chas. H. Windschuegl, Ltd., 1 Lead Street, London, E.C.3.

WANTED, Cetyl Alcohol, 1 to 7 lb. 56/3, C. & D. London Office.

WANTED, a "Southall & Smith" Powder Milling Machine for 10 grain Powders, preferably electrically operated. M. Calthorpe & Co., Vineyard Works, Ossett, Yorkshire.

WANTED, Microscopes, all models, particularly good outfits up to £300 or £400. High immediate cash. Wallace Heaton, Ltd., 127 Bond Street, W. 1.

WANTED, 4-oz. to 2-oz. Bottles, screw caps, cork. Must be made prior to July, 1944. 555/730, C. & D. London Office.

WANTED for Spot Cash. National, Remington and Gledhill Cash Registers, all sizes. Immaterial; any quantity entertained. Ammated Business Machines, Ltd., 64 Mortimer Street, W.1. Phone Museum 0941. Repairs, Sales, changes.

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benzyl benzoate emulsion

It has now been established that 'ASCABIOL' is effective in the treatment not only of scabies but of infestation with pediculosis capitis (the common head louse).

The new formula presents benzyl benzoate in the form of an emulsion, which not only destroys lice, but dissolves the cement by which nits adhere to the hairs. The nits can therefore be removed by simple washing instead of the painstaking use of the small-tooth-comb.

The greatly increased demand for this product has made possible substantial price reductions which come into operation to the medical profession and the general public on May 1st. Retail pharmacists will be supplied at the new prices as from April 3rd.

NEW PRICES

4 ozs. bottle (13 to the dozen) - 3/0d.
(plus 4d. Purchase Tax)

80 ozs. bottle 42/0d.
(plus 4/8d. Purchase Tax)
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